# REPORT

OF THE

# JAIPUR STATE

## Post-War Reconstruction Committee



Printed by Krishna Ram Mehta, at the Leader Press,
Allahabad

# CONTENTS



## APPENDICES

# Report of the Post-War Reconstruction Committee, Jaipur State, 1943.

## Section A : Preliminary

The Committee was appointed by the Government of Jaipur in the following order :

Government Order No 1010 S C, dated the 29th July, 1943

'His Highness' Government have had under consideration for some time various problems relating to Post War Reconstruction, with particular reference to the question of finding employment for those subjects of His Highness now engaged on war duties who are likely to return to civil employment after the cessation of hostilities His Highness' Government have also in view the need for a long period programme for developing the economic resources of the State on a systematic and planned basis These problems can best be reviewed by a special committee and Government are therefore, pleased to appoint a Committee for this purpose composed as follows —

Convener —Mr J C Rollo Special Education Officer, Jaipur

Members —1 Raja Sardar Singhji Bahadur of Khetri

2 Rao Bahadur Thakur Narendra Singhji of Jobner

3 Mr G Seshagiri Rao Chief Engineer for Irrigation

4 Dewan Bahadur Sardar Santokh Singh, Senior Officer, Sikar

5 Dr G Dessau, State geologist and Mining Engineer, Jaipur State

6 Khan Sahib M Altaf Ahmad Kherie, Member Revenue Board

7 Mr E da Costa, Private Secretary to the Prime Minister

8 Mr B G Bhattacharya, Secretary to the Government, Development Department

9. Mr P. N. Kathju, Director of Industrie and Commerce.
10 Mr. Karpoor Chandra Patni.
11. Dr. A. R. Normand, Church of " ' Mission.
12. Captain S. D. Pande, Principal, Bi'a College, Pilani.
13. Mr. B. H. Zaidi, Advocate

Secretary :—Mr. P. S. Narayan Prasad, Professor of Economics, Maharaja's College, Jaipur.

"In particular, the Committee is requested to report on the extent to which agricultural production in the State can be increased (a) by the development of irrigation facilities, both by tanks and by wells, (b) by the use of improved agricultural methods including schemes for crop planning suitable to local needs, and (c) by the adoption of methods of co-operative *farming*, and (*d*) other methods by which the health and economic condition of the agriculturist may be bettered

"The Committee is also requested to give its attention to problems of soil erosion and to make recommendations for the development and full utilization of forests in the State.

"In regard to industries, the Committee is requested to deal particularly with the assistance which will be required for industries in the State in order to enable them to adapt themselves to post-war conditions

"In the field of education, the Committee is requested to examine the extent to which educational facilities should be increased and the degree to which special emphasis should be placed on technical education

"The machinery and organisation which will be required to give effect to the Committee's recommendations may also be indicated"

The general Committee met five times in addition to the many meetings of the sub committees At the first meeting, on July 31, 1943, four sub committees were formed. These including members subsequently co opted were as follows .—

### Agriculture

Khan Sahib M A A Kherie, Convener
Raja Sardar Singhji Bahadur of Khetri
Mr G Seshagiri Rao
Dewan Bahadur Sardar Santokh Singh
Mr F da Costa
Captain S D Pande
Mr P S Narayan Prasad

### Industries

Mr P N Kathju Convener
Mr G Seshagiri Rao, subsequently Convener
Dr G Dessau
Mr B G Bhattacharya
Mr K C Patni
Mr P S Narayan Prasad
Mr M V Mathur (Professor of Commerce, Maharaja's College Jaipur)
Mr G J M Dickinson (Agent Imperial Bank of India, Jaipur)

### Health and Nutrition

*Dr A R Normand Convener*
*Mr G Seshagiri Rao*
Rao Bahadur Thakur Narendra Singhji of Jobner
Mr E da Costa
Mr B G Bhattacharya
Dr G Dessau
Mr B H Zaidi
Mr P S Narayan Prasad
Dr S N Consul

### Education

Mr J C Rolls Convener
Raja Sardar Singhji Bahadur of Khetri
Rao Bahadur Thakur Narendra Singhji of Jobner
Dewan Bahadur Sardar Santokh Singh
Mr P N Kathju
Mr K C Patni
Dr A R Normand

Mr L N [illegible] Agricultural Officer Jaipur State and Thakur Hira Singh Conservator of Forests were co-opted as members of the Agricultural Sub-committee

9 Mr P N Kathju, Director of Industries and Commerce

10 Mr Karpoor Chandra Patni

11 Dr A R *Normand, Church of Scotland Mission*

12 Captain S D Pande, Principal, Birla *College, Pilani*

13 Mr B H Zaidi, Advocate

Secretary —Mr P S Narayan Prasad, Professor of Economics, Maharaja's College, Jaipur

"In particular, the Committee is requested to report on the extent to which agricultural production in the State can be increased (*a*) by the development of irrigation facilities, both by tanks and by wells, (*b*) by the use of improved agricultural methods including schemes for crop planning suitable to local needs, and (*c*) by the adoption of methods of co operative farming, and (*d*) other methods by which the health and economic condition of the agriculturist may be bettered

"The Committee is also requested to give its attention to problems of soil erosion and to make recommendations for the development and full utilization of forests in the State

"In regard to industries the Committee is requested to deal particularly with the assistance which will be required for industries in the State in order to enable them to adapt them selves to post war conditions

"In the field of education, the Committee is requested to examine the extent to which educational facilities should be increased and the degree to which special emphasis should be placed on technical education

"The machinery and organisation which will be required to give effect to the Committee's recommendations may also be indicated"

The general Committee met five times in addition to the many meetings of the sub committees At the first meeting, on July 31, 1943, four sub committees were *formed* These including members subsequently co opted were as follows .—

make this possible Even a short period of lapsing would mean the loss of what they have gained, and there rests upon us therefore the most urgent responsibility of changing the conditions to which they return so that these will not reduce the men to their pre war level of living, material and mental Further, the ways in which these men have been benefited by the change to army life are precisely the ways in which the raising of the general standard, in town and country, throughout the State, is desirable, even necessary The return of men who have become accustomed to such a standard affords a unique opportunity of general uplift through their influence, provided, again, that conditions are so replanned by the State as to afford this opportunity

Thus there is really one all comprehensive problem, apart from the reabsorption question how to make life better in every sense for the people of the State The most clamant need is for improvement in the material necessities of life—for freedom from want and the fear of it There ought to be, beyond mere subsistence, a certain comfort and security for all and this is the first condition of educational, social, political advancement It is, fortunately perfectly feasible in Jaipur The resources and opportunities are present, and we have endeavoured to indicate how they may best be used, and how also given satisfactory food clothing and shelter, something can then be done for ' uplift ' in a less material sense

Four aspects of the single problem have been considered by our four sub committees for Agriculture Industry, Health and Nutrition, and Education which throughout were aware of each other s deliberations through overlapping of membership and the Secretary s membership of all sub-committees Thus there is little duplication, and, it is believed, no inconsistency, between the reports of the different committees

Each of these committees has had in mind the state of affairs in this particular State, and has tried to make entirely practicable proposals In each of the four spheres an immense extent of rapid progress is necessary and perfectly possible This applies particularly to industrial development. The

Captain S D Pande
Mr B H Zaidi
Mr P S Narayan Prasad

In Section B of this Report, the general problem is defined, provision for the future of those now engaged in war service is dealt with, so far as it is separable and machinery for economic planning is proposed The other sections consist of the reports of the four sub committees as revised by the general committee

In Appendix A will be found a brief account of present conditions in Jaipur State Readers unacquainted with Jaipur might do well to read this first Other appendices contain notes by experts, of a nature too detailed for insertion in the body of the Report

So far as possible we have obtained and worked on precise data, but there is a notable lack of statistical material in the State Our proposal (under "Machinery for Economic Planning") *for the institution in the State of a permanent Economic* Council with the service of statistical experts is designed partly to meet this need now and hereafter

## SECTION B

### 1 The General Problem

This investigation arises from the transitory problem of demobilization, both of soldiers and of others employed in war work The problem is partly that of their employment, partly that of ensuring for them satisfactory conditions of life There can be no doubt that for most of them life in the army has meant a definite raising of standards in several ways, income, food and clothing, health regime, hygienic conditions a methodical and disciplined way of life, comradeship and social amenities, physical recreation accurate information about events, acquaintanceship with people of other religions or races and genuine though limited education It would be most unfortunate if in their return to civil life they were obliged to lower these standards Rather it is to be desired that they should bring these new standards with them, as far as we can

make this possible Even a short period of lapsing would mean the loss of what they have gained, and there rests upon us therefore the most urgent responsibility of changing the conditions to which they return so that these will not reduce the men to their pre war level of living material and mental Further, the ways in which these men have been benefited by the change to army life are precisely the ways in which the raising of the general standard, in town and country, throughout the State is desirable, even necessary The return of men who have become accustomed to such a standard affords a unique opportunity of general uplift through their influence, provided, again, that conditions are so replanned by the State as to afford this opportunity

Thus there is really one all comprehensive problem, apart from the reabsorption question how to make life better in every sense for the people of the State The most clamant need is for improvement in the material necessities of life—for freedom from want and the fear of it There ought to be, beyond mere subsistence, a certain comfort and security for all, and this is the first condition of educational, social, political advancement It is, fortunately, perfectly feasible in Jaipur The resources and opportunities are present, and we have endeavoured to indicate how they may best be u ed, and how also given satisfactory food clothing and shelter, something can then be done for "uplift" in a less material sense

Four aspects of the single problem have been considered by our four sub committees, for Agriculture, Industry, Health and Nutrition, and Education, which throughout were aware of each other's deliberations through overlapping of membership and the Secretary's membership of all sub committees Thus there is little duplication, and, it is believed, no inconsistency, between the reports of the different committees

Each of these committees has had in mind the state of affairs in this particular State, and has tried to make entirely practical proposals In each of the four spheres an immense extent of rapid progress is necessary, and perfectly possible This applies particularly to industrial development The

predominant occupation is of course agriculture The recommendations of the Agriculture Committee cover every aspect of the agricultural question Improved and extended agriculture would, in mere food production, make an immense difference to the well being of the people But without industrial development agriculture will fall far short of its own possibilities It cannot prosper fully unless the people's purchasing power is greatly increased, and this can be brought about only by the development of industry, which of course includes not only large scale factory production but also cottage industries in the country, crafts work in the towns, and industries related to agriculture itself Industry, wisely initiated and controlled and kept far short of adventure and speculation—kept in reasonable relationship to the State's resources—will make and distribute wealth Wise planning must regard the distribution as of equal importance with the making Further, industry will enrich the State and increase its resources for every sort of welfare undertaking For example it can safely be said that without considerable industrial development there can never be universal education nor such general prosperity as will make possible adequate leisure and the means for the best employment of this Considering all this and the extreme backwardness of Jaipur like the States in general, in industry it cannot be wondered at that in our report we are inclined to emphasise the importance of the section dealing with industries

2 The Future of those Demobilized

d be
ı Ar
ce
Demo
tion

This period which may be of considerable length can be used to great advantage in concentrated training preparatory to entry or return to various civil occupations and such training is being planned by the Directorate of Welfare and Amenities at General Headquarters In this Jaipur can co operate by training soldiers (after the Armistice) as instructors to troops awaiting demobilization in certain occupational matters, and also in various aspects of welfare A detailed note on this is appended *

* Appendix B

Plans for those Demobilized

The demobilized soldiers will return to their homes prepared to enjoy a good holiday, and with a considerable sum of money They have earned both, but it is in their power to spend both unwisely. It is necessary to keep in touch with each of them from the day of demobilization, and enable him to realise that Government and his fellow citizens take an active though unobtrusive interest in his future It would be good if, for some time, the ex soldiers in the different parts of the State were given opportunities of meeting in a more or less convivial way, and were given the kind of entertainment to which they have become accustomed in the army They might be encouraged, also, to take the lead in village sports and recreations, and also in all sorts of village improvement, especially in sanitation and hygiene Among these men there is available an immense amount of knowledge and initiative that might be most valuable in the work of village reconstruction It is for the local officers to utilize this And a holiday so spent would be much better than idleness for the men themselves

They ought to be advised also, without interference, in the expenditure of their money, which is being accumulated with the special idea of procuring for them useful equipment, etc, for their future career Some should spend it (or keep it to be spent) on improved agricultural equipment The building of good houses for themselves would be another excellent use some could themselves build the houses, and most could at least join in this

It is desirable too that some agency, such as the National War Front should keep these men supplied with things to read, and particularly with news relating to post war development A special small periodical might well be produced for the discharged soldiery in Roman Urdu, and efficiently distributed to them this might perhaps be done by the Government of India but if not it could well be done for this State by the State itself through the National War Front with the help of the Publicity Officer and perhaps one or two other persons of editorial capacity Such a periodical would indeed have a usefulness far beyond the soldiers

predominant occupation is of course agriculture The recommendations of the Agriculture Committee cover every aspect of the agricultural question Improved and extended agriculture would in mere food production make an immense difference to the well being of the people But without industrial development agriculture will fall far short of its own possibilities It cannot prosper fully unless the people's purchasing power is greatly increased and this can be brought about only by the development of industry, which of course includes not only large scale factory production but also cottage industries in the country, crafts work in the towns and industries related to agriculture itself Industry, wisely initiated and controlled and kept far short of adventure and speculation—kept in reasonable relationship to the State s resources—will make and distribute wealth Wise planning must regard the distribution as of equal importance with the making Further, industry will enrich the State and increase its resources for every sort of welfare undertaking For example it can safely be said that without considerable industrial development there can never be universal education nor such general prosperity as will make possible adequate leisure and the means for the best employment of this Considering all this and the extreme backwardness of Jaipur like the States in general in industry it cannot be wondered at that in our report we are inclined to emphasise the importance of the section dealing with industries

## 2 The Future of those Demobilized

Period between Armistice and Demobilization

This period which may be of considerable length can be used to great advantage in concentrated training preparatory to entry or return to various civil occupations and such training is being planned by the Directorate of Welfare and Amenities at General Headquarters In this Jaipur can co operate by training soldiers (after the Armistice) as instructors to troops awaiting demobilization in certain occupational matters, and also in various aspects of welfare A detailed note on this is appended *

* Appendix B

hand Each large industry might be encouraged to conduct such training for itself; but instruction in agricultural methods and in the small industries would have to be undertaken by Government In the meantime the Amenities Department should be supplied—as it has desired—with notes in Roman Urdu (which it can use in one of its pamphlets for soldiers) regarding the post war plans and in particular regarding agricultural development and change

The granting of land and of concessions has been dealt with in the report of the Agriculture sub-committee It is to be desired that all those demobilized should, if possible, receive land, and have the pride and responsibility of a stake in the country even if they themselves do not work on the land The granting of land however, will be quite futile unless conditions of tenancy can be so changed that a man has the sense of security without which he cannot be expected to develop the land,—by the planting of orchards for example This matter has been referred to also in the report of the Health and Nutrition Sub-Committee

Should there be a considerable body of men that cannot immediately be provided for in the ways suggested above, they may be employed in the most urgently necessary public works The report of the Industries Sub-Committee has dwelt on the necessity of embarking immediately upon a planned programme of road making—both metalled and unmetalled roads This in itself needs re-emphasising here Communications are in a most elementary state and their improvement is essential not merely to agricultural and industrial development but to progress in every sphere All roads should be made and financed by the State, by means of loans if necessary, and this will make easier the employment of ex war-employees on this work But great care must be taken to avoid the employment in road labourer's work and other work of a purely physical character of men possessing or competent to acquire some kind of skill, since it dulls such capacity There is a striking lack of carts, and stagnation in their production Some might turn to this Housing and other village construction—also most

Their Employment and Training

Even before demobilization, however, the problem of their peace employment must be dealt with as far as possible It i necessary to prepare at once a census of all soldiers enlisted from the State (whether in the Jaipur forces or in others), with their former employments and their qualifications Information can be obtained from the enlisting authorities and the homes of the men A tenative schedule of suitable employment can be prepared with these data Immediately after demobilization, and in many cases before it advice can be given and the decis ons of the men obtained As many of them as possible may be fitted into the State s scheme of agricultural concessions and assistance industrial development, and public works Many of the men who hitherto have been engaged in agriculture will now prefer industrial or other work not on the land, and many others will have had no experience pointing in any particular direction In such cases there will be a special necessity for interviewing assessing capacity, and advising accordingly

There must be an Employment Bureau or Officer maintaining a complete register of demobilized war employees, readily available for consultation He must be completely aware of all openings in both government and private employment and not simply waiting to be consulted but constantly active in investigation of what has happened to the men and in presenting their claims to industrial and other employers who also should report vacancies to him

It would be an immense advantage if arrangements for various kinds of training classes could be perfected before the war ends The Army Amenities Department is doing its best to provide the men with practical knowledge related to peace time employment, and the effect of this attempt will be felt, but a sho t concentrated course of instruction after demobilization will, in the case of many occupations including agriculture, be necessary if the start or re start of the men is to fulfil the possibilities of the time There are industrial jobs which are to be learnt satisfactorily by a man as he goes along, but in many cases skilled labour should have some training before

hand. Each large industry might be encouraged to conduct such training for itself, but instruction in agricultural methods and in the small industries would have to be undertaken by Government In the meantime the Amenities Department should be supplied—as it has desired—with notes in Roman Urdu (which it can use in one of its pamphlets for soldiers) regarding the post war plans and in particular regarding agricultural development and change

The granting of land and of concessions has been dealt with in the report of the Agriculture sub-committee It is to be desired that all those demobilized should if possible receive land and have the pride and responsibility of a stake in the country even if they themselves do not work on the land The granting of land however will be quite futile unless conditions of tenancy can be so changed that a man has the sense of security without which he cannot be expected to develop the land—by the planting of orchards for example This matter has been referred to also in the report of the Health and Nutrition Sub-Committee

Should there be a considerable body of men that cannot immediately be provided for in the ways suggested above they may be employed in the most urgently necessary public works The report of the Industries Sub-Committee has dwelt on the necessity of embarking immediately upon a planned programme of road making—both metalled and unmetalled roads This in itself needs re-emphasising here Communications are in a most elementary state and their improvement is essential not merely to agricultural and industrial development but to progress in every sphere All roads should be made and financed by the State, by means of loans if necessary, and this will make easier the employment of ex war-employees on this work. But great care must be taken to avoid the employment in road labourer's work and other work of a purely physical character of men possessing or competent to acquire some kind of skill, since it dulls such capacity There is a striking lack of carts, and stagnation in their production Some might turn to this Housing and other village construction—also most

Their Employment and Training.

Even before demobilization, however, the problem of their peace employment must be dealt with as far as possible. It is necessary to prepare at once a census of all soldiers enlisted from the State (whether in the Jaipur forces or in others), with their former employments and their qualifications. Information can be obtained from the enlisting authorities and the homes of the men. A tenative schedule of suitable employment can be prepared with these data. Immediately after demobilization, and in many cases before it, advice can be given and the decisions of the men obtained. As many of them as possible may be fitted into the State's scheme of agricultural concessions and assistance, industrial development, and public works. Many of the men who hitherto have been engaged in agriculture will now prefer industrial or other work not on the land, and many others will have had no experience pointing in any particular direction. In such cases there will be a special necessity for interviewing, assessing capacity, and advising accordingly.

There must be an Employment Bureauor Officer maintaining a complete register of demobilized war employees, readily available for consultation. He must be completely aware of all openings in both government and private employment; and not simply waiting to be consulted but constantly active in investigation of what has happened to the men and in presenting their claims to industrial and other employers, who also should report vacancies to him

It would be an immense advantage if arrangements for various kinds of training classes could be perfected before the war ends. The Army Amenities Department is doing its best to provide the men with practical knowledge related to peace time employment, and the effect of this attempt will be felt; but a short concentrated course of instruction after demobilization will, in the case of many occupations including agriculture, be necessary if the start or re-start of the men is to fulfil the possibilities of the time. There are industrial jobs which are to be learnt satisfactorily by a man as he goes along, but in many cases skilled labour should have some training before-

possible also to get educated women together for this purpose. It is easy to depreciate the need for information and discussion, for hitherto even the educated public has, on the whole, been but little interested in the development of the resources of the State But it will be found, as time goes on, that nothing is more valuable than a well informed and constructive and even critical public opinion In suggesting revision in university education we have had this in view, but it is possible to take other steps immediately to promote general interest and discussion

## 4 Machinery for Economic Planning

Development in any sphere is conditioned by economic considerations, and economic improvement is itself the aim of most development proposals It is necessary therefore that both now and permanently Government should have the assistance of a body of economic advisors The need for an Economic Advisory Council has long been recognized. In 1928 the establishment of such bodies was recommended by the League of Nations, and they have been established in Great Britain and other European countries In India Sir Arthur Salter, Director of the Economic and Financial Section of the League of Nations, in his scheme submitted to the Government of India in 1931, suggested the establishment of such bodies both at the centre and in the provinces, and Sir M Visveswaraiya has persistently advocated this as essential to any satisfactory economic planning.

It is desirable to have a very small expert staff of economists and statisticians continuously employed in the collection and analysis of information relating to industries, agriculture marketing labour co-operation, industrial and rural finance transport and every other branch of development work. It can maintain a regular statistical service available to private enterprise as well as to Government It will be able to advise Government on all technical economic matters [illegible] economic legislation

A larger Council, advised by and including the [illegible] staff, would also be useful It would be [illegible]

urgently necessary—might for many be a suitable employment, temporary or permanent, and there will also be a considerable demand for the erection of large public buildings,—schools, for example

It need hardly be said that satisfactory war service should constitute a strong claim for appointment to posts for which a man is also qualified otherwise, though this of course should never be so applied as to diminish efficiency It is for the consideration of Government whether posts for which war-employees are likely to be suited should in the meantime be filled only temporarily It is always to be kept in mind that men in the army have rendered to the country a service without which all *freedom* would have been lost for centuries, and that they have faced the hazard of disablement and death

There are quite a number of Jaipurians who have become war technicians They not merely require consideration in view of their service but will be of special use to the State Great care should be exercised in directing them to the employment where they may be most useful, and in providing them with specialized training where it is necessary

### 3 Public Information and Discussion

It is desirable to use all possible means of awakening public interest in the post war problems that are now being considered, and to make known, not only to the demobilized but to the people in general, the plans approved by Government We need, for example, a form of *Newsletter* that will be intelligible to all who are literate, which would, incidentally, be of great service in conserving literacy Discussion on all levels should be stimulated, but particularly among well educated people In colleges and schools there should be discussion groups which should include pupils as well as teachers, and systematic addresses should also be given for the conveying of information and the setting out of points for discussion There should be citizens groups in which teachers would play a part no doubt, but educated men in other walks of life should be encouraged to take the lead in these It should be

possible also to get educated women together for this purpose. It is easy to depreciate the need for information and discussion, for hitherto even the educated public has, on the whole, been but little interested in the development of the resources of the State But it will be found, as time goes on, that nothing is more valuable than a well informed and constructive and even critical public opinion In suggesting revision in university education we have had this in view, but it is possible to take other steps immediately to promote general interest and discussion

4 Machinery for Economic Planning

Development in any sphere is conditioned by economic considerations, and economic improvement is itself the aim of most development proposals It is necessary therefore that both now and permanently Government should have the assistance of a body of economic advisors The need for an Economic Advisory Council has long been recognized In 1928 the establishment of such bodies was recommended by the League of Nations and they have been established in Great Britain and other European countries In India Sir Arthur Salter, Director of the Economic and Financial Section of the League of Nations, in his scheme submitted to the Government of India in 1931, suggested the establishment of such bodies both at the centre and in the provinces, and Sir M Visveswaraiya has persistently advocated this as essential to any satisfactory economic planning

It is desirable to have a very small expert staff of economists and statisticians, continuously employed in the collection and analysis of information relating to industries, agriculture, marketing, labour, co operation, industrial and rural finance, transport and every other branch of development work It can maintain a regular statistical service available to private enterprise as well as to Government It will be able to advise Government on all technical economic matters including economic legislation

A larger Council, advised by and including the small expert staff, would also be useful It would be presided over by a

minister, and would include the heads of all departments in the State and also non official representatives of industry, commerce, finance and possibly other branches Such a body, competent on the economic side and also competent to judge every aspect of each problem, could both consider and initiate development proposals, and would be invaluable in the co ordination of policy It would have the great advantage too of bringing together, for discussion and agreement, interests which otherwise might conflict, and through it unofficial experience, judgment and enterprise might play an important part in development While its functions would be purely advisory, the conclusions at which it arrived by general agreement would naturally have great weight with Government

Section C Agriculture

Terms of Reference

1 This Committee has been asked to report on problems relating to post war reconstruction with particular reference to the question of finding employment for those subjects of His Highness now engaged on war duties who are likely to return to civil employment after the cessation of hostilities In particular, this sub committee is concerned with the question as to how agricultural production in the the State can be increased—

(a) by the development of irrigation facilities both by tanks and wells

(b) by the use of improved agricultural methods,

(c) through schemes for crop planning suited to local needs,

(d) by the adoption of methods of co operative farming

It is concerned also with other methods by which the health and economic condition of the agriculturist may be bettered

The Sub committee has also been requested to give its attention to the problems of soil erosion and to make recommendations for the development and proper utilization of forests in the State

2 While this Sub-Committee recognises its special responsibility in respect of finding occupation for demobilized soldiers it cannot lose sight of the fact that the problems raised are of a general nature and must be treated on a wider basis than that of finding employment for soldiers alone — Scope of Enquiry

3 It is necessary if full use is to made of the resources of the State that there should be deliberate plan for developing our agricultural production and it is the opinion of this Sub Committee that we should prepare a plan for a definite period say five years during which necessary changes should be introduced on the lines indicated below — Object res Agricu tn Pol cy

The nature of these changes is no doubt open to discussion but we may adopt tentatively certain suggestions made by the International Food Conference recently held in U S A These suggestions are likely to find general acceptance even though in detail they will need many modifications to adapt them to local conditions and the special problems of the State

They may be classed under four main heads —

(a) In the Post War period there should be a planned increase in agricultural production in order to meet minimum food requirements The increased cultivation of cereals should be ... first ... productio[illegible] making a [illegible] e g milk [illegible] and fruits Adequate attention must also be given to the development of commercial crops but this should not be allowed to curtail food production unduly

(b) Adequate production should be maintained by securing for producers fair prices for their commodities If agricultural production is to be permanently [illegible] that [illegible] proposed whe[illegible] of prices [illegible] of subsidies where necessary and by State encouragement through marketing societies which will enable the cultivator to obtain a fair return for his produce

( ) To increase agricultural production new lands must be brought under cultivation by the grant of all concessions required to ensure that suitable land will be taken up and cultivated

(d) It is also necessary that side by side with the increase in agricultural production there should be development of agricultural industries and subsidiary occupations suited to each area We consider that, where possible experiments should be made in the preparation of dehydrated and canned goods for which a considerable market exists Certain tentative suggestions are made below in regard to some lines on which development may be sought

*Some Facts about Agriculture in the State*

4 Broadly speaking the main difficulty in regard to the development of agriculture in the State is the inadequacy and uncertainty of rainfall The average rainfall does not exceed 20 inches a year, and over more than half of the State it is below 15 inches The available irrigated land in the Khalsa area is less than 3,40 000 bighas and it seems unlikely that this figure can in a short period be greatly increased It is clear, therefore, that apart from the extension of irrigation facilities, the field for which is limited, the only form of agriculture which is feasible is dry farming The table below gives figures for the Khalsa area of the actual area cultivated and the area available for cultivation and also of the ploughs and the plough cattle

| | Bighas |
|---|---|
| Total Khalsa area | 46,70 568 |
| Area under cultivation | 17 25 252 |
| Irrigated area | 3,40,008 |
| Unirrigated area | 13 85 244 |
| Cultivable fallow (excluding the new fallow under occupation) | 13,98,581 |
| Number of ploughs in the Khalsa area . | 1 38 754 |
| Number of plough cattle do | 4 75 822 |

*Capital Requirements*

5 It will be seen that an area of 13 98 581* bighas is available for extension of cultivation and we consider that it should be the main aim of our policy to bring as much of this area as possible under cultivation within the next five years

This extension of the area under cultivation involves, among other problems that of shortage of labour, and also to

* This estimate is only approximate Vide Appendix C.

an almost equal extent, that of shortage of ploughing implements and cattle Assuming that a pair of bullocks and a plough can deal with 15 bighas of land, the equipment required to bring the whole of this culturable waste in the Khalsa area under cultivation would be about 93,000 ploughs and 1,86,000 ploughing cattle These requirements have to be provided for almost *in toto*, as the existing stock of ploughs is only 1,38,754 and that of ploughing cattle 4,75,822, leaving hardly any surplus for new cultivation Assuming that a plough costs R 20 and each pair of bullocks Rs 100, the total capital required to ensure this extension would come to Rs 2,56,51,100 This capital has to be provided mainly by private finance, and the grant of land for cultivation may be made conditional upon the person concerned finding the necessary capital for agricultural implements, plough cattle, etc In special cases the State may provide the necessary capital, by direct grants or through Taqavi or co operative finance

On the whole we consider that it is not an impossible task to bring under cultivation within the next five years the greater portion of the available cultivable area We consider the place of agriculture in the State's economy so important that i should not shrink from the heavy responsibilities which such a plan would undoubtedly involve

Proposed Disposal of Land

6 Land may be given to any one willing to settle on it either for the purpose of cultivating it himself or getting it cultivated by his relatives, servants or sub tenants and he should have therein the tenure of heritable tenancy, to be enjoyed—

(i) rent free for the first 10 years,

(ii) at half the ordinary rate of rent payable for lands of similar quality for the rest of his life and for the life of his legitimate sons surviving him , or should he leave no legitimate sons, then for the lives of such legitimate grandsons that is, legitimate sons of his predeceased legitimate sons, as may survive him ,

(d) It is also necessary that side by side with the increase in agricultural production there should be development of agricultural industries and subsidiary occupations suited to each area We consider that, where possible, experiments should be made in the preparation of dehydrated and canned goods, for which a considerable market exists Certain tentative suggestions are made below in regard to some lines on which development may be sought

*Some Facts about Agriculture in the State*

4 Broadly speaking the main difficulty in regard to the development of agriculture in the State is the inadequacy and uncertainty of rainfall The average rainfall does not exceed 20 inches a year, and over more than half of the State it is below 15 inches The available irrigated land in the Khalsa area is less than 3,40,000 bighas and it seems unlikely that this figure can in a short period be greatly increased It is clear, therefore, that apart from the extension of irrigation facilities, the field for which is limited, the only form of agriculture which is feasible is dry farming The table below gives figures, for the Khalsa area, of the actual area cultivated and the area available for cultivation, and also of the ploughs and the plough cattle

| | Bighas. |
|---|---|
| Total Khalsa area | 46,70,508 |
| Area under cultivation | 17,25,252 |
| Irrigated area | 3,40,008 |
| Unirrigated area | 13,85,244 |
| Cultivable fallow (excluding the new fallow under occupation) | 13,98,581 |
| Number of ploughs in the Khalsa area . | 1,38,754 |
| Number of plough cattle do | 1 75,822 |

*Capital Requirements*

5 It will be seen that an area of 13,98 581* bighas is available for extension of cultivation and we consider that it should be the main aim of our policy to bring as much of this area as possible under cultivation within the next five years

This extension of the area under cultivation involves, among other problems that of shortage of labour, and also, to

* This estimate is only approximate *Vide* Appendix C.

colonists This will enable them to carry into their peacetime life some of that *esprit de corps* which is so valuable a part of their war time training It will also make it easier to introduce co operative and collective methods of farming The provision of social amenities is of very great importance

8 While the grant of land to demobilized soldiers is very necessary and they should be given the right of the first refusal of lands available, the Sub committee considers that since increased agricultural production is also to be aimed at, land not required by soldiers should be granted on similar terms to civilians also, particularly to educated unemployed persons who may be willing to cultivate the land or to get it cultivated by their relatives, servants or sub tenants Grant of Land to civilians.

9 This work of settling soldiers and others on land can be undertaken successfully and in time only if all the necessary preparation is made before the end of the war It seems necessary, therefore, to appoint a land colonization officer to whom the work of carrying out the preliminary investigations and planning for the contemplated agricultural settlements should be entrusted He should be asked to investigate, among other matters, the area of cultivable land available in each village or *tehsil*,* its distance from the nearest railway station, the kind of soil available (according to revenue classification), the prevailing rates of rent for such land, and whether or not irrigation facilities are provided including information regarding the level of the sub soil water, etc The same officer may also be entrusted with the duty of planning these settlements, keeping in view the many recommendations made in this report concerning agricultural development and organization Colonization Officer

10 It has been brought to our notice that tenancy conditions compare unfavourably with those in the adjoining British Indian Provinces, and it is necessary to improve conditions of security and tenure so as to stimulate greater interest in his lands on the part of the cultivator Tenancy Conditions.

11 Wherever conditions permit, every effort should be made for the sinking of new wells and the repairing of old Irrigation Facilities & Policy

*Appendix C

(iii) and after these successive lines at the ordin rent payable for land of similar quality

(b) For new settlers on land concessions may be given regard to rent, etc, similar to those mentioned below in t paragraph on irrigation (Para 11)

The preliminary preparation of new land for purposes cultivation is often a matter of expense for the agricultur particularly in regard to levelling and the first ploughi This latter item of work can be done better and more chea with the help of tractors We therefore recommend that t Agricultural Department should maintain a few tractors, a make them available for the first ploughing, for hire char which should be as small as possible

Quotas for the Grant of Land

7 We suggest that grant of land might be made on t basis of the following figures for different ranks —

| | | |
|---|---|---|
| N C O s and Sepoys in the Jaipur State Forces or the Indian Army | 60 | bigh |
| Officers in the Jaipur State Forces or holding Viceroy s Commission | 80 | ,, |
| State Officers or those holding King s Commission | 120 | ,, |

It would appear that, except in respect of new irrigat works no *Chahi** land is available and even in regard to n works, most of the land to be brought under irrigation already under private holding For this reason, the reco mendations are confined in the main to *Barani*† land Assumi that the net average return from a bigha of *Barani* land wou be Rs 10‡, the approximate net income from the land suggest would be as follows —

| | Rs |
|---|---|
| N C O s and Sepoys | 600 |
| Indian Officers | 800 |
| State Officers | 1,200 |

As far as possible, the grant of this land may be made large contiguous blocks so that the holders may live together

* *Chahi* land = irrigated land
† *Barani* land — unirrigated land
‡ *Vide* Appendix D

famines in an arid though fertile tract The need for the extension of irrigation facilities is from every point of view most pressing and we consider that no expenditure should be spared in achieving this as rapidly as is technically feasible

Food Crop

There should be a detailed scheme of crop planning designed to secure the maximum agricultural production and the optimum distribution of area between food and non food crops With regard to food production we endorse the suggestion of the Nutrition Sub committee that the Government should have a permanent food policy and a committee to consider details of planned food production Such a food policy should aim mainly at two things, as suggested by the International Food Conference Firstly, in the immediate post war period there is likely to be a general shortage of cereals and it should be the aim of governments to plan for this contingency In Jaipur, as perhaps in every other part of India there is shortage of food in relation to the need for it and the aim of the Government should be to provide for this need by extending the area under cultivation of such cereals as wheat and barley starchy foods like potatoes and millets like bajra and maize In course of time the Government should also attempt to increase the production of protective foods like milk fruit vegetables and pulses according to a well formulated plan brought into effect by sustained and vigorous propaganda as well as by direct Government assistance whenever required

In the matter of planning for food production we may perhaps make a distinction between immediate and ultimate objectives Immediately it should be the aim of the Government to provide for as much food production as is practicable with a view to making the State as nearly self-sufficient as possible This is mainly as a precaution against the recurrence in the post war world of difficulties of transport etc which will prevent our importing the food we require for our immediate needs In the long run, however it is desirable that the economy of India as a whole should be taken into account and land should be devoted to

ones A special survey may be carried out by the Irrigation Department and selection made of the existing *pucca* wells *nadas* etc which require repairs that can be effected in the next five years If the repairs or construction cannot be carried out by the cultivator himself, even with the help of *Taqavi* loans, the Irrigation Department should itself under take the work The view has, however, been expressed before us that it is much more economical for the construction of wells to be left in private hands than for it to be undertaken by a government department There seems to be need for some publicity to bring home to the cultivators the liberal concessions in rent already available for the construction of new irrigation works or the improvement of those already existing and for bringing fallow lands under cultivation, as there is reason to believe that insufficient advantage is being taken of them

In the opinion of the Sub committee Government might set aside every year, for the next five years, a sum of Rs 2 lakhs for the repair of old wells and the construction of new ones This allotment should be in addition to the allotments that are usually made for *Taqavi* purposes and should be funded so that unspent balances do not lapse It may also be desirable to give, for the next five years, *Taqavi* loans for this purpose free of all interest Besides this, permission may be readily given to remove wood from forests or elsewhere for the construction of wells or for other *bona fide* productive requirements of agriculturists The Irrigation Department might give technical advice regarding construction of wells etc free of charge, particularly in regard to the construction of *kham* wells in river beds or other low lying areas According to a note (Appendix E) kindly prepared for this Committee by the Chief Engineer for Irrigation it would appear that there is scope for bringing under cultivation over 43 000 bighas of land in the near future It is also pointed out that investigation may reveal further scope for extending the area under irrigation We have to add that the extension of irrigation facilities in a state like Jaipur should not be judged by whether or not they are productive undertakings They should be undertaken as protective expenditure" which is necessary as the best insurance against periodical

famines in an arid, though fertile, tract 'The need for the extension of irrigation facilities is from every point of view most pressing and we consider that no expenditure should be spared in achieving this as rapidly as is technically feasible

There should be a detailed scheme of crop planning, designed to secure the maximum agricultural production and the optimum distribution of area between food and non food crops With regard to food production, we endorse the suggestion of the Nutrition Sub committee that the Government should have a permanent food policy and a committee to consider details of planned food production Such a food policy should aim mainly at two things, as suggested by the International Food Conference Firstly, in the immediate post war period there is likely to be a general shortage of cereals, and it should be the aim of governments to plan for this contingency In Jaipur, as perhaps in every other part of India, there is shortage of food in relation to the need for it, and the aim of the Government should be to provide for this need by extending the area under cultivation of such cereals as wheat and barley, starchy foods like potatoes and millets like bajra and maize In course of time, the Government should also attempt to increase the production of protective foods like milk, fruit, vegetables and pulses, according to a *well formulated* plan brought into effect by sustained and vigorous propaganda as well as by direct Government assistance whenever required Food Crop

In the matter of planning for food production we may, perhaps make a *distinction* between immediate and ultimate objectives Immediately, it should be the aim of the Government to provide for as much food production as is practicable with a view to making the State as nearly self-sufficient as possible This is mainly as a precaution against the recurrence in the post war world of difficulties of transport, etc which will prevent our importing the food we require for our immediate needs In the long run, however it is desirable that the economy of India as a *whole* should be taken into account, and land should be devoted to

ones A special survey may be carried out by the Irrigation Department and selection made of the existing *pucca* well *nadas* etc which require repairs that can be effected in the next five years If the repairs or construction cannot be carried out by the cultivator himself, even with the help of *Taqavi* loans, the Irrigation Department should itself undertake the work The view has, however, been expressed before us that it is much more economical for the construction of wells to be left in private hands than for it to be undertaken by a government department There seems to be need for some publicity to bring home to the cultivators the liberal concessions in rent already available for the construction of new irrigation works or the improvement of those already existing and for bringing fallow lands under cultivation, as there is reason to believe that insufficient advantage is being taken of them

In the opinion of the Sub committee, Government might set aside every year, for the next five years, a sum of Rs 2 lakhs for the repair of old wells and the construction of new ones This allotment should be in addition to the allotments that are usually made for *Taqavi* purposes and should be funded so that unspent balances do not lapse It may also be desirable to give for the next five years *Taqavi* loans for this purpose free of all interest Besides this permission may be readily given to remove wood from forests or elsewhere for the construction of wells or for other *bona fide* productive requirements of agriculturists The Irrigation Department might give technical advice regarding construction of wells etc free of charge, particularly in regard to the construction of *kham* wells in river beds or other low lying areas According to a note (Appendix E) kindly prepared for this Committee by the Chief Engineer for Irrigation it would appear that there is scope for bringing under cultivation over 43 000 bighas of land in the near future It is also pointed out that investigation may reveal further scope for extending the area under irrigation We have to add that the extension of irrigation facilities in a state like Jaipur should not be judged by whether or not they are productive undertakings They should be undertaken as protective expenditure" which is necessary as the best insurance against periodical

lizers is rather difficult because they are not suited to local conditions and are not economical The local cultivator cannot afford them and in any case it would appear that the manures best suited to the soil in Jaipur State are green manure, compost and bone char The use of imported varieties of simple agricultural implements which have proved successful should, however, be made more general In order to help agriculture as much as possible, we also suggest the production of agricultural implements within the State, if possible through the organization of a State workshop, and their sale at cost price For this purpose co operation between the Departments of Agriculture and Industries and Commerce is necessary, and we consider that the matter is important enough to be dealt with by a special committee on which both departments will be represented

15 We have been informed that large scale power farming with the help of agricultural machinery cannot be undertaken except in very special circumstances which hold over a very limited area of the State Further, on this matter there is some difference of opinion While it is recognized that in special circumstances there are undoubted advantages in the use of tractors it has been pointed out that in the existing conditions with numerous small holdings their use may not in many places, be practicable, and it may also tend to increase agricultural unemployment If co operative methods of farming prove successful then the introduction of tractors may be desirable For this reason we are of opinion that if there are to be some newly settled agricultural colonies or model villages organized for co-operative farming colonists may be assisted in acquiring tractors and using them experimentally The experience gained from these experiments may be used later in other villages

16 The increasing of agricultural production and the improving of the economic condition of the agriculturists are, to a very large extent, bound up with the quality and number of their live stock Little attention seems to have been given to this problem, particularly to cattle breeding and fodder supply

such types of cultivation as will bring in the largest returns, irrespective of whether this is done by the cultivation of food or non food crops In regard to the choice of food crops which need special encouragement, we find ourselves in agreement with the *suggestions made by the* Nutrition Sub committee and would refer to the recommendations made in its report

In regard to non food crops, consideration may be given to the cultivation of fodder crops, especially *jowar*, *gowar*, carrots and lucerne, and also *loong* and *jala* in suitable areas Other crops suggested are sugarcane, groundnut, cuminseed and long staple and medium staple cotton We understand, however, that it will not be possible to extend the area of sugarcane to any great extent because of the inadequacy of irrigation Cultivation of vegetables on the lines suggested by the Nutrition Sub *committee may also be undertaken*

13 Regarding crop planning we regret that it has not been possible for us to make detailed investigations and recommendations of a more concrete character This has been due to the inadequacy of statistical information * and we would incidentally suggest that steps should be taken as early as possible, to compile preliminary statistical data with regard to acreage of different crops and to obtain at least rough estimates regarding crop yields etc, on the lines of the statistics published by the Government of India We would also propose that the work of crop planning may be assisted by offering direct subsidies or by indirect encouragement like the maintenance of prices For crops which are to be discouraged a discriminating revenue assessment may also be considered Assistance may also be given by the free supply of seeds in the first instance, by the offering of technical advice and by supplying cheap implements

14 To improve crop strains the introduction of quality seeds should be effected *through village* punchayats and co operative societies Wherever possible the distribution of new seeds free of cost *at least in the case of some of* the crops should be undertaken The use of imported varieties of ferti

*Appendix I

lands, for the purpose of growing purely fodder crops. Thirdly, it most important to arrange for proper conservation in times when fodder supply is abundant There is certainly a great deal of waste in the use of fodder at such times, and to rectify this the habit of building up fodder reserves in years of good rainfall should be developed To this end, we suggest that there should be State fodder reserves, if possible one in each Tehsil If this is not possible in all the Tehsils, they may be maintained at least in the Tehsils of Moazzamabad, Chaksu, Malpura, Niwai and a portion of [illegible] subject to [illegible] be helped to maintain its own fodder reserve, managed by the village punchayat, and arrangements may be made through some kind of co operative management for maintaining reserves of fodder for at least one year's use We attach considerable importance to the last of these proposals, and would recommend that a beginning should be made with this scheme without delay *

The protection of people, stock and land from the ravages of wild animals is of great importance Fresh cultivation may be hindered by this danger

17 In addition to the specific improvements suggested above, the improvement of agricultural organization through a vigorous co operative movement seems to be necessary, and it is the view of this Committee that rural co operation may well be used as "the chief instrument for rural reconstruction" But it is desirable to avoid the mistakes committed in the organization of the co operative movement in other parts of India We feel strongly that the starting of co-operative activity at the credit end by the creation of societies for the purpose of money lending, has rendered difficult the realization by the agriculturist in general of the true spirit and purpose of co operative activity We are not averse to the starting of credit co-operation, but it is our considered view that if co-operation is to be truly understood, a beginnin

* Also vide Appendix G

The production of quality cattle should be carefully planned and for this purpose work of the kind that is being done by the Rishab Sudhar Mandal at Pilani may be undertaken with State assistance This association aims at the maintenance of a cattle farm, and the sale or gift of stud bulls to villagers who undertake to follow certain instructions for maintaining the purity of the breed of cattle A striking example of the value to a village of breeding from fine cattle is to be found in the Sikar village of Khuri There are already two hundred descendants of the stud bull and the pride of the villagers in these and their economic improvement are equally notable The State should maintain centres of its own similar to and on a larger scale than those maintained by the Mandal at Pilani

We understand that the toll taken by cattle diseases is very heavy and that measures existing at present for prevention and cure are very inadequate We consider that the loss suffered by agriculturists by the premature death of their cattle is very serious and the Government should undertake without delay all measures necessary for the prevention where possible of these diseases and for prompt and adequate attention when epidemics break out This will involve a considerable increase in the State s veterinary services but this need must be faced This development is demanded by the needs of other animals also —for instance horses, camels sheep goats and dogs and there should be in every town a skilled veterinary officer with enough expert assistance to make possible care for outlying places also

With regard to the fodder problem one special feature in this State is that there is great variation in fodder supply between different seasons of the year and also between years when the rainfall is good and those in which the rains fail This results in the death of cattle on a large scale during years of fodder scarcity As a measure to avert these periodical disasters, we recommend the extension of the forest area, particularly in places where rainfall is comparatively low, though this can only very partially solve the problem Secondly, lands in each village may be specially set aside as pasture

lands, for the purpose of growing purely fodder crops Thirdly, it most important to arrange for proper conservation in times when fodder supply is abundant There is certainly a great deal of waste in the use of fodder at such times, and to rectify this the habit of building up fodder reserves in years of good rainfall should be developed To this end we suggest that there should be State fodder reserves, if possible one in each Tehsil If this is not possible in all the Tehsils, they may be maintained at least in the Tehsils of Moazzamabad, Chaksu, Malpura, Niwai and a portion of Sawai Jaipur, as these are areas which are particularly subject to fodder scarcity Fourthly, each village should be helped to maintain its own fodder reserve, managed by the village punchayat and arrangements may be made through some kind of co operative management for maintaining reserves of fodder for at least one year's use We attach considerable importance to the last of these proposals and would recommend that a beginning should be made with this scheme without delay *

The protection of people stock and land from the ravages of wild animals is of great importance Fresh cultivation may be hindered by this danger

17 In addition to the specific improvements suggested above the improvement of agricultural organization through a vigorous co operative movement seems to be necessary, and it is the view of this Committee that rural co operation may well be used as 'the chief instrument for rural reconstruction But it is desirable to avoid the mistakes committed in the organization of the co operative movement in other parts of India We feel strongly that the starting of co-operative activity at the credit end by the creation of societies for the purpose of money lending, has rendered difficult the realization by the agriculturist in general of the true spirit and purpose of co operative activity We are not averse to the starting of credit co-operation, but it is our considered view that if co-operation is to be truly understood, a beginning

* Also vide Appendix Q

should be made with non credit co operative societies We would also suggest that before launching the co operative movement, particularly in rural areas, there is need for planning the details and for carefully training the personnel of the Co operative Department The Registrar of Co operative Societies and a staff of inspectors should be adequately trained at co operative institutions in British India

18 One of the most useful channels for the energies of the co operative movement is that of co operative marketing In the marketing of agricultural produce in Jaipur, as in most other places the difference between the price paid by the consumer and that received by the producer is unduly large If the Government could do anything to eliminate the middleman and his agents, this might add from 15 to 20 per cent to the income of agriculturists Marketing Societies started in other parts of India have been of great assistance both to the agriculturist and to rural artisans and we recommend that steps should be taken to develop the co operative marketing movement in the State There should also be a State marketing department the duty of which would be to study the marketing conditions and the possibility of developing markets This department should wherever possible, co operate with the marketing departments of the Government of India and those of the provinces and other states. It would be advisable to maintain at important centres State or bank or co operative society warehouses, and arrangements may be made for accepting warehouse receipts as security for the advancing of finance to the agriculturist by co operative societies or banks

19 Rural co operation may also be developed in the case of subsidiaries like dairying cattle breeding supply of fodder, production of wool and purchasing of seed and implements

20 We also suggest the starting in a few selected centres, of co operative multi purpose agricultural societies These societies finance the production as well

as consumption needs of the agriculturist, supply his seed, manure and implements, take over his marketing, and in this way tackle all his problems through one single agency There is much to commend this form of co oper ation Much good work on the basis of these societies has been done in the U P, and that experience may be usefully borrowed by us But as in the other aspects of co operative activity, we cannot too strongly emphasize the need for quality rather than quantity, and we should prefer a few societies which work efficiently to a large number of bad ones

21 The financing of the co operative movement will have to be greatly assisted by the State For this purpose it may be desirable to raise finance through the flotation of debentures Finance for Co-operation

22 With regard to credit societies, we are in favour of of deferring them to a later stage In the meanwhile, how ever, rural credit needs cannot altogether be neglected As for the requirements of seasonal finance, for the time being money lender finance must no doubt continue to provide these But money lender finance is subject here as elsewhere, to certain defects which need to be remedied There is a good deal of avoidable unfairness in dealings between money lenders and village agriculturists The money lender s rate of interest is too high he forces his clients to write a bond for larger sums that what are given, he often realizes a year s interest in advance without treating it as actually received, and it is a common practice to compound interest with the principal after some time and ask for a fresh bond for the new amount Practices of this character should be eradicated as rapidly as possible, and the adoption of rural debt legislation on the lines of what has been done in some of the provinces in recent times and its rigorous enforcement seems to be urgently called for As a help in the solution of this rural debt problem we also recommend that the control on social extravagance introduced during war time may be continued in the post war period Rural Debt Legislation

23 Another useful suggestion that has come to us in this connection is for the starting of Nidhis or indigenous Rural Credit through Nidhis.

4

banks on the lines of similar institutions working in the Madras Presidency According to the *Nidhis* system, the members pool their savings or fixed monthly instalments every month Lots are drawn and the month's pool is taken by one member This is a form of saving which is independent of the security furnished by the members of the society individually or collectively It may be used, and has been used in the Madras Presidency, to provide short term agricultural capital This experience may be helpful to Jaipur

24 Co operation may also be used for the purpose of consolidation of holdings and the elimination of fragmentation No precise figures are available but there are indications that the evil of subdivision of holdings exists on a fairly wide scale in this State and any considerable increase in agricultural production cannot be achieved without consolidation In most cases such schemes are remunerative and there is no question of payment of premiums by the members of the society It is possible, *however that costs of consolidation* may, for some time have to be met by the Government, and the actual work of consolidation of holdings may have to be carried through under Government supervision after the necessary legislation has been enacted In that case the expenditure incurred by the Government can be treated as a loan given to the society repayable in a prescribed number of instalments which can be recovered with the land revenue of the members *concerned It would be inadvisable* in view of the many difficulties to undertake too heavy a programme of consolidation of holdings at once The suggestion therefore, is made that experiments should be tried in one or two Nizamats and the scheme gradually extended to others in the light of experience gained

25 Co operative farming in the present circumstances *is not very easy* to undertake owing to the illiteracy of the agriculturists and their complete lack of knowledge regarding co operation and in view of certain other agrarian conditions relating to tenancy, etc This can only be

thought of at a later stage, but, in the meanwhile, attempts may be made in one or two places newly brought under cultivation to organize villages on the principle of co operative farming This may be best undertaken if it is possible to select for these colonies a few educated men as settlers, and grants of land may be made to them on the specific understanding that the lands will be cultivated co operatively. If this could be done, it might be possible to introduce side by side with co-operative farming power farming involving the u e of tractors and other agricultural machinery Such experiments would serve a double purpose—first as models for other colonies and villages, and second as valuable experiments on which future practice may be based

*Afforestation and Soil Erosion*

26 The inadequacy of forests at present seems to need urgent attention In the net Khalsa area of 4,657 square miles the area under forests is only 343 square miles, which must be considered grossly inadequate Even this area is more or less concentrated in one place, leaving the larger part of the State denuded of forests The development of forests is necessary both for providing reserves of food and fuel and for preventing soil erosion and increasing the prospects of rainfall Further, this seems to be the only way of preventing the very evident tendency of the western desert area gradually to encroach to the east For these reasons a vigorous policy of afforestation should be pursued No return for the money spent should be expected for the first eight or ten years, although it is quite likely that the unremunerative period may be less than this This development should begin in those areas bordering on the rivers Banas and Chambal where the problem of soil erosion has assumed vast proportions owing to denudation of forests It is desirable that those areas which are subject to extensive erosion and those in which ravine formations have taken place should be handed over to the Forest Department so that they may arrange, if possible, for their reclamation

*Model Villages*

27 If the post war plans for colonization succeed, the State should endeavour to plan, in one or two of these

newly extended areas, and also at the rate of one in each Tehsil the organization of model villages These may be colonized by soldiers or educated persons, or preferably both, and they should be planned in all details concerning farming, subsidiary industries and rural reconstruction in general, as villages which deserve emulation by the rest of the State Here experiments in co operative farming and the use of tractors and other machines may be made

Uniform Policy for Khalsa and Non Khalsa Areas

28 We hope that these recommendations will appeal to all in both the *Khalsa* and the *non Khalsa* areas, and that where there is difficulty in carrying them out, as there may be in some of the *Thikanas*, the Government will consider giving any reasonable aid

## Section D —Industries

The Terms of Reference

1 The Industries Sub Committee was asked 'to deal particularly with the assistance which will be required for the industries in the State in order to enable them to adapt them selves to post war conditions" Further, "His Highness Government have also in view the need for a long period programme for developing the economic resources of the State on a systematic and planned basis" The Sub committee therefore offers proposals designed to meet both the imme diate post war industrial problems and the whole problem of development

### I The Immediate Problems of Industry

Immediate & Ultimate Objectives interrelated

2 The problems of industry in the period following the end of the war may be considered in two broad categories,— (i) the difficulties arising out of demobilization of technical and other labour from war industry the cessation of war demands and the probable slump in prices requiring short period aids, (ii) the further problem of planning the development of industry in the next few years, and the principles governing such development Of course, the two are interrelated and can best be considered together

Two Aspects of Short period Aids

3. For a short period following the war, state aid for industrial adaptation will be needed in two ways —(i) the

demobilized soldiers and technicians will have to be reabsorbed in peace time industry by the creation of suitable conditions of industrial development, and (ii) the volume of purchasing power in the hands of the community should be maintained against an inevitable deflation of currency, which, if too great, would lead to a depression in prices, a lowering of the demand for consumer's goods and increased unemployment

4 As regards planning for the employment of demobilized men, a list of those in war-employment should now be prepared, and should if possible, record, their qualifications and any civil training received by them during their war service, so as to facilitate their absorption in industry This register could perhaps be maintained by the Industries Department

A Register to be Kept of those now in War Employment

5 A standing committee consisting of officials and representatives of industry may be constituted, with the Director of Industries as Chairman to make a detailed investigation into the questions (i) how the demobilized men may be reabsorbed, (ii) whether any war industries may be converted to peace production and (iii) the exact nature of the help monetary and other which the State might give to the industries in such transition And (iv) this committee may also be entrusted with the work of preparing in the meanwhile, the capital estimates required for the private industrial undertakings to be planned in the post war period These estimates have to be got ready if applications for priorities in obtaining machinery etc are to be made effective The estimates for government undertakings will be prepared by the departments Unless these estimates are prepared immediately, it may not be possible in the post - -

to obtain priori

condemned to start with the deadly handicap of second rate plant and machinery

A standing committee is necessary for this purpose for two reasons Investigations and plans can be useful only when made in collaboration with representatives of industry, and the nature and needs of such adjustment can be best judged by a

newly extended areas, and also at the rate of one in each Tehsil the organization of model villages These may be colonized by soldiers or educated persons, or preferably both, and they should be planned in all details concerning farming, subsidiary industries and rural reconstruction in general, as villages which deserve emulation by the rest of the State Here experiments in co operative farming and the use of tractors and other machines may be made

Uniform Policy for Khalsa and Non Khalsa Areas

28 We hope that these recommendations will appeal to all in both the *Khalsa* and the *non Khalsa* areas, and that where there is difficulty in carrying them out, as there may be in some of the *Thikanas*, the Government will consider giving any reasonable aid

## Section D'—Industries

The Terms of Reference

1 The Industries Sub Committee was asked "to deal particularly with the assistance which will be required for the industries in the State in order to enable them to adapt themselves to post war conditions" Further, "His Highness' Government have also in view the need for a long period programme for developing the economic resources of the State on a systematic and planned basis". The Sub committee therefore offers proposals designed to meet both the immediate post war industrial problems and the whole problem of development

### I The Immediate Problems of Industry

Immediate & Ultimate Objectives interrelated.

2 The problems of industry in the period following the end of the war may be considered in two broad categories,—(i) the difficulties arising out of demobilization of technical and other labour from war industry the cessation of war demands and the probable slump in prices requiring short period aids, (ii) the further problem of planning the development of industry in the next few years, and the principles governing such development Of course, the two are interrelated and can best be considered together

Two Aspects of Short period Aids

3. For a short period following the war, state aid for industrial adaptation will be needed in two ways.—(i) the

demobilized soldiers and technicians will have to be reabsorbed in peace time industry by the creation of suitable conditions of industrial development, and (ii) the volume of purchasing power in the hands of the community should be maintained against an inevitable deflation of currency, which, if too great, would lead to a depression in prices, a lowering of the demand for consumer's goods, and increased unemployment

A Register to be Kept of those now in War Employment

4 As regards planning for the employment of demobilized men, a list of those in war employment should now be prepared, and should, if possible, record, their qualifications and any civil training received by them during their war service, so as to facilitate their absorption in industry. This register could perhaps be maintained by the Industries Department

5 A standing committee consisting of officials and representatives of industry may be constituted, with the Director of Industries as Chairman, to make a detailed investigation into the questions (i) how the demobilized men may be reabsorbed, (ii) whether any war industries may be converted to peace production and (iii) the exact nature of the help, monetary and other, which the State might give to the industries in such transition And (iv) this committee may also be entrusted with the work of preparing in the meanwhile, the capital estimates required for the private industrial undertakings to be planned in the post war period These estimates have to be got ready if applications for priorities in obtaining machinery, etc , are to be made effective The estimates for government undertakings will be prepared by the departments Unless these estimates are prepared immediately, it may not be possible, in the post war scramble, for applicants from this State to obtain priorities, and post war industrial schemes may be condemned to start with the deadly handicap of second rate plant and machinery

A standing committee is necessary for this purpose for two reasons Investigations and plans can be useful only when made in collaboration with representatives of industry , and the nature and needs of such adjustment can be best judged by a

committee which, on the one hand, makes a detailed study of the growth of war industry, and, on the other hand, has an idea of the concrete details of actual developments contemplated in the post war years This committee may be useful *also* in translating into practice some of the proposals made in this report regarding further short period aids to industry

A Public Works Policy as an Anti depression Measure

6 In the first months or years following the end of the war, industries in the State may have to face a depression in prices following the contraction of purchasing power caused by the cessation of war demand and the demobilization of labour *from war industries* This will have repercussions on agricultural prices and it is probable that a general downward movement of prices will have to be faced This is likely to aggravate the state of unemployment and under employment In such an event it becomes the responsibility of the State to help to maintain the price level as well as the volume of purchasing power in the hands of the community, so as to maintain empoyment at as high a level as possible This could be done by undertaking a policy of public works Fortunately for us in Jaipur there are several directions in which public works of great utility may be undertaken Roads and bridges, irrigation projects hydro electric projects forests—all these form productive investments An extremely useful undertaking *would* be the *proposed* extensions of the Jaipur State Railway lines from Jaipur to Amber and Bairath on one side and to Diggi Malpura and Todaraisingh on the other

Such works should be planned carefully now and the planning *should include if possible arrangements for the* provision of finance at the appropriate time If launched immediately after the war they will create employment and absorb a good fraction of the demobilized soldiers and technicians This special public works programme should be maintained during the period (in all probability between one and three years) of adjustment to peace time production In the meanwhile public works which the administration may consider non-essential may be postponed

7 Besides public works undertaken by the State it is also desirable to stimulate private investment, which would have the same effect of bringing about increased employment and would supplement the stimulus given through public works For this well-conceived housing and town planning schemes are desirable During periods of depression it has been noticed that there is generally a boom in the building trade in towns caused by the activity of middle class people with fixed incomes, because during such periods the value of their real income, and therefore their ability to save, increases This should be taken advantage of by the State, which may promote house building (a) by giving financial aid on a large scale to co operative housing agencies (b) by encouraging the floatation of private housing development companies and (c) by itself undertaking on a large scale the construction of dwellings for labourers and the poorer section of the population This would be a further indirect aid in maintaining purchasing power and the level of employment Supplementary Private Investment—Housing Policy

8 The financing of such public works need not be limited to the funds available from normal revenue sources The revenues of the State during such times will have a tendency to contract The temptation in fact, during such times is to effect economies and retrenchment but in our view this is precisely what should be avoided if the depression is to be successfully countered Funds for the extra outlay necessitated by a depression and designed to create employment and maintain incomes, must be found somehow, and borrowing may be resorted to if necessary, for the purpose of undertaking the public works programme, provided this policy is supplemented by arrangements for the prompt repayment of loans when the necessary adjustments have taken place and private industry has been stimulated adequately and does not stand in need of support from State activity Such expenditure on public works is all the more desirable because, in the present undeveloped condition of the State most of this expenditure would be of a productive character and would repay itself in course of time Finance for Public Works by Public Borrowing

committee which, on the one hand, makes a detailed study of the growth of war industry, and, on the other hand, has an idea of the concrete details of actual developments contemplated in the post war years This committee may be useful also in translating into practice some of the proposals made in this report regarding further short period aids to industry

A Public Works Policy as an Anti depression Measure

6 In the first months or years following the end of the war, industries in the State may have to face a depression in prices following the contraction of purchasing power caused by the cessation of war demand and the demobilization of labour from war industries This will have repercussions on agricultural prices, and it is probable that a general downward movement of prices will have to be faced This is likely to aggravate the state of unemployment and under employment In such an event it becomes the responsibility of the State to help to maintain the price level as well as the volume of purchasing power in the hands of the community, so as to maintain employment at as high a level as possible This could be done by undertaking a policy of public works Fortunately for us in Jaipur, there are several directions in which public works of great utility may be undertaken Roads and bridges, irrigation projects, hydro electric projects forests—all these form productive investments An extremely useful undertaking would be the proposed extensions of the Jaipur State Railway lines from Jaipur to Amber and Bairath on one side and to Diggi Malpura and Todaraisingh on the other

Such works should be planned carefully now and the planning should include if possible arrangements for the provision of finance at the appropriate time If launched immediately after the war they will create employment and absorb a good fraction of the demobilized soldiers and technicians This special public works programme should be maintained during the period (in all probability between one and three years) of adjustment to peace time production In the meanwhile public works which the administration may consider non-essential may be postponed

Supplementary Private Investment—Housing Policy

7 Besides public works undertaken by the State, it is al o desirable to stimulate private investment, which would have the same effect of bringing about increased employment and would supplement the stimulus given through public works For this, well conceived housing and town planning schemes are desirable During periods of depression it has been noticed that there is generally a boom in the building trade in towns, caused by the activity of middle class people with fixed incomes, because during such periods the value of their real income, and therefore their ability to save, increases This should be taken advantage of by the State, which may promote house building (a) by giving financial aid on a large scale to co-operative housing agencies, (b) by encouraging the flotation of private housing development companies and (c) by itself undertaking on a large scale the construction of dwellings for labourers and the poorer section of the population This would be a further indirect aid in maintaining purchasing power and the level of employment

Finance for Public Works by Public Borrowing

8 The financing of such public works need not be limited to the funds available from normal revenue sources The revenues of the State during such times will have a tendency to contract The temptation, in fact, during such times is to effect economies and retrenchment, but in our view this is precisely what should be avoided if the depression is to be successfully countered Funds for the extra outlay necessitated by a depression and designed to create employment and maintain incomes, must be found somehow, and borrowing may be resorted to if necessary for the purpose of undertaking the public works programme provided this policy is supplemented by arrangements for the prompt repayment of loans when the necessary adjustments have taken place and private industry has been stimulated adequately and does not stand in need of support from State activity Such expenditure on public works is all the more desirable because, in the present undeveloped condition of the State most of this expenditure would be of a productive character and would repay itself in course of time

## II Long Period Industrial Development

Marketing Board for Organized Marketing of the State's Products

9 But one of the most important ways of aiding industry lies in finding and tending the markets for goods We refer elsewhere (see *infra*, para 16) to the question of marketing in relation to cottage industries and agricultural produce, but all the work of marketing should come within the purview of a Marketing Board, to be added to the department of Industries and Commerce Co operation with the marketing departments elsewhere in India is very desirable, particularly in the work of arranging grade standards, etc, and this should be undertaken at the earliest opportunity For some of our products there is wide scope for demand in foreign markets, if the proper presentation of samples etc, is arranged through the Trade Commissioners of the Government of India in other countries Development of co operative marketing particularly for the products of small industries, like those of the handloom seems to hold out great prospects

Urban Co-operation for the Development of (a) Cottage, Industry

10 Besides marketing, co operation may be encouraged in urban areas, as this organization may well prove to be a great convenience to industrial activity It is suggested elsewhere (see *infra*, para 16) that the starting o industrial co-operatives for cottage industries may be advantageous such an organization will have the advantage of encouraging decentralization of industry, and should be welcomed for this reason too Encouragement through arrangements for financing, may also be given to consumers co operative societies These societies have been a great success in many parts of India and abroad, and with the sound commercial instincts which the people of this region possess this variety of co operation may well be successful here Co operative housing development in urban areas would have a wide usefulness and the financing of no other form of co operation is so sound and safe as the financing of housing development The State need not have the least hesitation in financing housing schemes for *bona fide* dwelling requirements (avoiding speculative construction), even by the raising of loans and stimulating the development of housing societies

(b) Consumers Societies

(c) Housing Societies

There are one or two other ways in which industrial growth may be further aided by the State The Jaipur State Railway might frame a rates policy particularly designed to encourage local commerce and industry Small trains or coaches may be run from neighbouring villages to the towns at appropriate times, providing transport for milkmen, vegetable sellers and other traders If this is done, the area of the market will be widened to the mutual advantage of the town and village dwellers Specially cheap rates may be fixed for such transport Concessions may be issued to *bona fide* traders visiting markets and fairs with their wares The control of investment also is a means by which, indirectly, the State can aid private industry By making it obligatory for new public companies to obtain prior approval of the Government, the State may decide which industries should have a priority in development and may thus make conditions of capital raising comparatively easy for the more important industries Reasonable facilities (like the grant of free land and loans for erecting buildings) may be offered to any business houses operating outside the State but willing to move into the State as a result of such concessions

Miscellaneous Aids to Industry

(a) Railway Rates

(b) Controlled Investment

12 We consider that the State should be prepared to assist in a policy of industrialisation but that it should not undertake functions which can efficiently be discharged by private enterprise In this State capital and enterprise are not lacking and it should be the object of the State to create the conditions under which their most profitable use is possible without encroaching upon the field which is ordinarily left to private enterprise The widest measure of freedom should be allowed to industrial undertakings so that they may adapt themselves rapidly to changing conditions The State should regulate the conditions of labour and hours of work and may provide information and supply power when available In special cases where the necessary capital is not forthcoming except with Government aid a part of the investment may be taken up by the State Risk bearing in industry, however is not as a rule a function which should be discharged by the State

Industries should not be State owned

## II Long Period Industrial Development

A Marketing Board for Organized Marketing of the State's Products

9 But one of the most important ways of aiding industry lies in finding and tending the markets for goods We refer elsewhere (see *infra*, para 16) to the question of marketing in relation to cottage industries and agricultural produce, but all the work of marketing should come within the purview of a Marketing Board, to be added to the department of Industries and Commerce Co operation with the marketing departments elsewhere in India is very desirable, particularly in the work of arranging grade standards etc, and this should be undertaken at the earliest opportunity For some of our products there is wide scope for demand in foreign markets, if the proper presentation of samples, etc, is arranged through the Trade Commissioners of the Government of India in other countries Development of co operative marketing particularly for the products of small industries, like those of the handloom seems to hold out great prospects

Urban Co operation for the Development of (a) Cottage Industry

10 Besides marketing co operation may be encouraged in urban areas, as this organization may well prove to be a great convenience to industrial activity It is suggested elsewhere (see *infra*, para 16) that the starting o industrial co operatives for cottage industries may be advantageous such an organization will have the advantage of encouraging decentralization of industry, and should be welcomed for this reason too

(b) Consumers' Societies

Encouragement, through arrangements for financing may also be given to consumers co operative societies These societies have been a great success in many parts of India and abroad, and with the sound commercial instincts which the people of this region possess this variety of co operation may well be successful here Co operative housing development in urban areas would have a wide usefulness and the financing of no other form of co operation is so sound and safe as the financing of housing development

(c) Housing Societies

The State need not have the least hesitation in financing housing schemes for *bona fide* dwelling requirements (avoiding speculative construction), even by the raising of loans, and stimulating the development of housing societies

There are one or two other ways in which industrial growth may be further aided by the State The Jaipur State Railway might frame a rates policy particularly designed to encourage local commerce and industry Small trains or coaches may be run from neighbouring villages to the towns at appropriate times, providing transport for milkmen, vegetable sellers and other traders If this is done, the area of the market will be widened to the mutual advantage of the town and village dwellers Specially cheap rates may be fixed for such transport Concessions may be issued to *bona fide* traders visiting markets and fairs with their wares The control of investment also is a means by which, indirectly, the State can aid private industry By making it obligatory for new public companies to obtain prior approval of the Government, the State may decide which industries should have a priority in development, and may thus make conditions of capital raising comparatively easy for the more important industries Reasonable facilities (like the grant of free land and loans for erecting buildings) may be offered to any business houses operating outside the State but willing to move into the State as a result of such concessions

Miscellaneous Aids to Industry

(a) Railway Rates

(b) Controlled Investment

12 We consider that the State should be prepared to assist in a policy of industrialisation but that it should not undertake functions which can efficiently be discharged by private enterprise In this State capital and enterprise are not lacking and it should be the object of the State to create the conditions under which their most profitable use is possible without encroaching upon the field which is ordinarily left to private enterprise The widest measure of freedom should be allowed to industrial undertakings so that they may adapt themselves rapidly to changing conditions The State should regulate the conditions of labour and hours of work, and may provide information and supply power when available In special cases where the necessary capital is not forthcoming except with Government aid a part of the investment may be taken up by the State Risk bearing in industry, however, is not as a rule a function which should be discharged by the State

Industries should not be State owned

Exception

13 In the case of all public utility undertakings, however, we hold emphatically that they should be State owned, and should be operated with consideration of social advantage rather than of raising revenue Water-works, electrical concerns, telephones, broadcasting etc, come into this category Nor does there seem to be any objection to the official operation of concerns of a semi commercial character possessing public utility Wherever the need exists, municipalities may run motor transport for local traffic purposes and raise a revenue if possible, by competitive rating Similarly, the tourist industry may well be run by the State and in this case there seems to be fair reason for charging what the traffic will bear

Large and Medium Sized Industries under Consideration

14 Certain proposals for the establishment of large and medium scale industries were outlined before the Committee by the Director of Industries and Commerce these industries are as *follows* —

1 Cement
2 Mineral acids and alum
3 Boots and shoes
4 Tanning
5 Oil mill
6 Rectified spirit
7 Power alcohol
8 Cold storage plant
9 Hosiery
10 Porcelain goods
11 Pharmaceutical products
12 Clocks and watches
13 Machine tools bolts and nuts
14 Starch
15 Scientific apparatus
16 Sugar refineries and a sugar factory
17 Radio sets, excluding valves
18 Telephones and accessories
19 Textiles
20 Glass industry

It is not within the scope of this inquiry to go into a detailed investigation relating to proposed industries But the committee would like to suggest the following principles —

(i) The industries selected should be such as promise continued prosperity in post war years

(ii) For this purpose a detailed investigation should invariably precede the starting of every industry, with reference not only to technical production factors but also to economic factors like costs and prices (present and prospective), the availability of markets and raw materials, and the nature of competition (present and prospective)

(iii) Great vigilance is necessary in the selection of site and machinery The latter [illegible] be as up to date [illegible] these industries [illegible] with technical [illegible] n the pre war

(iv) Caution is desirable in respect of the experience and standing of business men and [illegible] who are to have d [illegible] while it is [illegible] possible pitfall. [illegible] ments should not be lost sight of Any failures would have a serious effect on the psychology of investment

(v) It is desirable to obtain in advance an idea of the nature and extent of [illegible] the State and als [illegible] during which such [illegible]

(vi) To examine new proposals for industry in the light of these and other recognized principles, it is desirable for the State to have a number of expert scientific and technical consultants and an economic advisory body of the kind suggested in Section B of this Report These advisers would not have a deciding voice but the results of their scrutiny and informed criticism would be available to Government before decisions were taken. This would minimize the risks of optimism and enthusiasm

Urban Cottage Industries

15 The development of cottage industries should form an important aspect of post war reconstruction because there are several of these for which Jaipur is famous and which can still be profitably revived The limitations from which they suffer are as follows The workers are illiterate, and have no idea of adapting their work to the consumers' tastes, easy going and idle, they do not understand the modern ways of efficient and regular production, their tools are primitive and hamper their capacity to compete with machine made products, the middleman, interested entirely in his profit and seeking to score at every stage, often acts in such a manner as to kill the goose that lays the golden eggs, and the methods of marketing are old fashioned, and in many cases the consumer who is eager to buy is never reached by the industry

Their Limitations

Organization for Development

16 Much can be done to improve matters provided the State plans and leads in the reorganization In Jaipur, with the talent available such reorganization should prove easy This planning for handicrafts has three aspects—those of (a) marketing, (b) production and (c) finance

(a) Marketing—an Emporium of Handicrafts

To start with marketing, there should be a central Emporium of Handicrafts maintained by the State, like the emporia maintained by the Governments of U P and Bihar It should combine a museum of products with a sales department having as many sections as possible—brass work, cut semi precious stones, jewellery made of or fitted with them, carved products, porcelain and pottery textiles, lacquer and papier mache work carpets durries, furniture *choondries*, felts, bangles, etc , etc It should be a place to which the tourist or the consumer could go with perfect confidence The Emporium should distribute price lists and catalogues, advertise the goods in all possible ways establish agencies, get in touch with the trade commissioners of the Government of India in other countries, have stalls in exhibitions, and so on It should be assisted by a staff of marketing officers to be posted in different provinces and states in India Their functions will be (a) to run a branch of the Emporium, (b) to collect information about the needs of the consumers in that locality, (c) to indicate

the nature of competing products, etc They need not be highly paid officials A scale of salary ranging round a hundred rupees will be sufficient The whole scheme should easily prove a commercial success, and need not be a liability on the State funds—provided an able, well trained business man is put in charge Even should it entail some expenditure from revenues it is worth undertaking considering its great advantages to the people of the State

Government might consider the adoption of State marks guaranteeing to the purchaser the authenticity and genuineness of the products and their conformity with the advertisements Precious metal work should bear marks indicating the content in fineness of the metal used Clear distinctions should be made between ivory and imitations between the various textile fabrics etc

(b) Production

But the success of the Emporium will necessarily depend on the proper planning of production itself For this a central Polytechnic of the kind recommended by the Education Sub Committee would be necessary It should impart instruction to artisans in improved methods of production It must have an expert staff to study the way in which the talent available may be adapted to produce new things that can go on the market Working in co operation with the Emporium it will combine employment with instruction The pupil will also be a worker and will be paying his way while learning his lessons at any rate in the later stages of his studentship The Polytechnic will itself be a huge workshop too, producing for the Emporium and thus wholly or partly paying its own way

(c) Finance through Co-operatives

But the larger field of private production needs planning also The worker when he goes out should not be reduced to the position of a wage earner under a visionless middleman He should have the necessary financial aid in buying his tools and raw materials and in maintaining himself while producing Such finance is the very life of the handicraft industry

This help may be given through the starting of co-operative agencies Here too, the rich experience of the British Indian

provinces is available It is quite possible to adapt that experience The co operative society will not be a mere financing agency That would lead to disastrous results, for the artisan may borrow and not repay It will be a multi purpose society, organized under a department of the State It will finance him not in money but by supplying him with tools, raw materials and reasonable needs of life, but the accounts will be kept in money The society will then buy the finished goods or market them co operatively Co operation is good because whatever profit is made will be the worker's alone And if the society controls every stage of the work it will lead to safer finance

Other steps may be taken, and details may be worked out more fully, but this offers the skeleton of an organization which would add to the artisans' income and the quantity of employment In this the Department of Industries has a task which may be comparatively easy of accomplishment because the labour and the necessary tradition are already there

Subsidiary Agricultural Industries

17 The improvement of the economic wellbeing of the rural population, it is widely recognized, is bound up with the development not only of agriculture but also of several industries subsidiary to it A proper investigation may reveal scope for the development of many such industries, but we suggest that in the first instance concentrated attention should be given to the following as they seem to be capable of immediate development

(a) Woollen Industry

In regard to the woollen industry the prospects are bright, if only some very simple defects are removed In the first place, the wool, as at present marketed, is far from clean, and its producers do not know how to separate the soft from the hard wool , and as a result the whole of the wool is sold at the price of the inferior variety, although this is estimated to be only about 15% of the total Demonstrations in the method of clipping wool should be arranged by the State Certain experiments in sheep breeding at the Pilani farm have proved to be very successful, and scientific sheep breeding on these lines might be tried at one

or two selected centres At present sheep breeding is in the hands of illiterate people, and if it is organized on scientific lines this industry alone may give employment to a good number of ex soldiers and others now in war-employment The development of this important agricultural raw product would also render easy the starting of a woollen textile mill in the State As far as possible, plans for these two industries may be considered as falling under one scheme

(b) Dairying

The dairy industry also seems to hold out excellent prospects Such tracts of land as are not fit for the cultivation of important crops may be developed as pasture lands If dairying is taken up (alongside of cattle breeding) in such places and elsewhere it may develop into another important agricultural industry India imports annually large quantities of milk products and under a suitable organization there is no reason why this industry may not be planned to cater for this market Again the difference in the price of milk and milk products between the urban and village areas is enormous and this could be largely eliminated if dairying were developed on modern lines

(c) Cattle Breeding

Another subsidiary industry is that of cattle breeding There is a good market for cattle both in the neighbouring states of Rajputana and in the adjoining British Indian provinces Even for local needs the production of quality cattle should be carefully planned (Vide the section on Agriculture)

(d) Handloom Industry

Another very important industry in the rural areas is the handloom industry We have no exact information as to how many people are employed directly or indirectly in this industry, but the fact that handloom cloth is being exported from the State after meeting a good fraction of local needs indicates its extensive character At present the industry is in a flourishing condition, but at the end of the war when the mill cloth prices may be expected to fall it will be in trouble, particularly the spinning section While the State may not be able to aid the hand-spinning industry it should assist the handloom weavers particularly through marketing agencies and

provinces is available It is quite possible to adapt that experience The co operative society will not be a mere financing agency That would lead to disastrous results, for the artisan may borrow and not repay. It will be a multi purpose society, organized under a department of the State It will finance him not in money but by supplying him with tools, raw materials and reasonable needs of life, but the accounts will be kept in money The society will then buy the finished goods or market them co operatively. Co operation is good because whatever profit is made will be the worker's alone And if the society controls every stage of the work it will lead to safer finance

*Other steps may be taken, and details may be worked out* more fully, but this offers the skeleton of an organization which would add to the artisans' income and the quantity of employment In this the Department of Industries has a task which may be comparatively easy of accomplishment because the labour and the necessary tradition are already there

Subsidiary Agricultural Industries

17 The improvement of the economic wellbeing of the rural population, it is widely recognized, is bound up with the development not only of agriculture, but also of several industries subsidiary to it A proper investigation may reveal scope for the development of many such industries, but we suggest that in the first instance concentrated attention should be given to the following as they seem to be capable of immediate development

(a) Woollen Industry

In regard to the woollen industry the prospects are bright, if only some very simple defects are removed In *the first place, the wool, as at present marketed, is far from* clean, and its producers do not know how to separate the soft from the hard wool and as a result the whole of the wool is sold at the price of the inferior variety, although this is estimated to be only about 15% of the total Demonstrations in the method of clipping wool should be arranged by the State Certain experiments in sheep breeding at the Pilani farm have proved to be very successful, and scientific sheep breeding on these lines might be tried at one

or two selected centres At present sheep breeding is in the hands of illiterate people and if it is organized on scientific lines this industry alone may give employment to a good number of ex-soldiers and others now in war-employment The development of this important agricultural raw product would also render easy the starting of a woollen textile mill in the State As far as possible, plans for these two industries may be considered as falling under one scheme

*(b) Dairying* The dairy industry also seems to hold out excellent prospects Such tracts of land as are not fit for the cultivation of important crops may be developed as pasture lands If dairying is taken up (alongside of cattle breeding) in such places and elsewhere it may develop into another important agricultural industry India imports annually large quantities of milk products and under a suitable organization there is no reason why this industry may not be planned to cater for this market Again, the difference in the price of milk and milk products between the urban and village areas is enormous and this could be largely eliminated if dairying were developed on modern lines

*( ) Cattle Breeding.* Another subsidiary industry is that of cattle breeding There is a good market for cattle both in the neighbouring states of Rajputana and in the adjoining British Indian provinces Even for local needs the production of quality cattle should be carefully planned (Vide the section on Agriculture)

*(f) Handloom Industry* Another very important industry in the rural area is the handloom industry We have no exact information as to how many people are employed directly or indirectly in this industry but the fact that handloom cloth is being exported from the State after meeting a good fraction of local needs indicates its extensive character At present the industry is in a flourishing condition but at the end of the war when the mill cloth prices may be expected to fall, it will be in trouble particularly the spinning section While the State may not be able to aid the hand-spinning industry it should assist the handloom weavers particularly through marketing agencies and

co operative societies and by organizing production centres at important places These centres should finance, through the medium of co operative societies, the production of hand woven cloth Further aid could be given to this industry by starting a textile branch in a technical school, and also by starting within the State a textile mill for producing yarn in counts suitable for handloom workers

Detailed investigation will reveal the possibilities of other rural industries like bee keeping production of vegetable fodder, rope making lac collection sericulture and poultry breeding The possibility of developing dehydration as a regular industry, as recommended by the Nutrition Committee, may also be considered

Development of Mines

18 The greater part of the Jaipur mining industry is quite sound and vital, and fortunately in the immediate post war period, when so many activities will have to rely on direct assistance from the Government, it will be quite able to look after itself, if only at the right time some necessary administrative changes are adopted

One of these administrative measures which cannot be too strongly recommended, is the conversion of the prevailing short term mining leases into very long term ones of 20 or 30 years These are the terms in use in British India and in all the more advanced countries No psychological moment could be more favourable for introducing this change than the present one, because the lease holders owing to war time profits, are in a mood to secure the sources of their gains for a longer period The holders of short term leases tend to exploit the mineral deposits intensively and irrationally in boom times, without any regard for the future and to give them up in times of depression whereas the holders of long term leases to avoid decadence in the leases will continue work in less profitable periods even at temporary financial loss They will also be more ready for investment in machinery etc which bears fruit only after a comparatively long period But in all cases minerals should be available for industries within the State territory and the lessee should not be permitted to

strangle local industries by refusing to supply minerals, while supplying them to factories outside

As regards the *development* of the mining industry one project, namely the reopening of the old Khetri copper mines, is already under the active consideration of the Jaipur Government, and, if successful, will be of great importance for the economy of the State Beyond this, there does not seem to be much scope for expansion But though the hopes of discovery and utilization of new deposits are not very bright, there is need for an unrelenting exploration on the part of the Mining Department, which should be duly strengthened and endowed

19 An appendix *to this Report gives a brief idea of a *project under contemplation for hydro electric power* generation Jaipur State is plain country, with much of soft and sandy soil, and the natural features do not easily lend themselves to bringing about the conditions of storage and large drop in short distance necessary for economical generation of power The only possible situation, as indicated in the appendix, is under investigation Preliminary surveys have shown that it is possible to generate electricity there by water power, and the project is being worked out in financial detail It is expected that the plan will soon be ready

Hydro electric Power Development

20 Another indispensable aid to the development of commerce and industry (as well as agriculture) is the development of rural roads in which respect also there is need for considerable expansion in the State, particularly in the northern districts The ideal to be aimed at is that no village should be more than half a mile away from a good road, and we in this State are still very far from this ideal Considering the extent to which the development of industry and agriculture is conditioned by the development of roads, the committee feels that this at all events, must accompany, if not precede, the development of industry and agriculture There can be no more useful project than the development of roads Money spent on this would be most productive, and the necessary

Road Development

* Appendix II

6

expenditure might confidently be raised though loans For this work also the necessary estimates and finance plans should be prepared forthwith, so that the work may be taken in hand without loss of time at the end of the war

In planning road development, however, it seems necessary to keep in mind the following principles —

(a) A balance should be struck between the development of metalled highways and the extension of unmetalled rural roads For agricultural needs and rural marketing the latter are as important as the former

(b) Every extension of mileage should be, approximately at any rate, measured against the likely economic advantages that would follow such extension, particularly because the cost per mile of road making and maintenance in a sandy tract like Jaipur is fairly high

(c) Even if there are going to be local self government institutions, road making should remain a responsibility of the State Road making and maintenance by local bodies in British India has not yielded satisfactory results

(d) If road development is to be financed by loans, as recommended above, the rate of progress should be so arranged that the expense of this investment (interest on the loans, and the cost of maintenance of roads) could be met without undue strain on the normal revenues of the State It is no use making roads the maintenance of which is impossible We also recommend the setting up of a Transport Development Board to co ordinate the various means of transport and to draw up plans for their extension and improvement

As part of this problem of rural transport, the Committee also considered the question of a suitable design for a village cart and that of pneumatic tyres for bullock carts In the opinion of the committee the design of the local bullock cart is quite suited to local needs and it is not considered necessary to recommend the extended use of the pneumatic tyre—except in urban areas and in the service of industrial undertakings which involve large and concentrated transportation—owing to (1) the common use of wooden wheels on local carts, which do not wear out roads quickly, (2) the high initial cost o pneu-

matic tyres, and (3) the ignorance of the villagers, which renders manipulation difficult

*Financial Reforms.*

21 Although a detailed examination of the State's public finance falls outside the scope of this committee's inquiry, a reference to this aspect is perhaps not out of place in view of the intimate relation between proper arrangements in public finance and the development of the State's economic resources. The amount spent annually by the State on development departments greatly influences the pace of development, and we invite attention to statistical information of a comparative character given as an appendix* to this report Besides, it must be borne in mind that the general character of revenue and expenditure influences, in a number of indirect ways, the development of the region † The following measures of financial reform relevant to development might be considered

(i) In order to achieve equity in the distribution of the tax burden, it seems desirable to establish certain direct taxes which would make possible the introduction of the principle of progression in taxation and would bring about greater correspondence between tax and ability to pay than is possible under a system of indirect taxes

(ii) Development of taxation by local bodies is necessary in order to release a larger percentage of the State's revenue for development purposes

(iii) Government might consider whether funds held in investment by the State could be used in developing productive resources

*Labour Legislation*

22 Protection of the interests of labour has been effected in this State through the Jaipur Factories Act of 1940 The provisions of this Act are generally satisfactory We would suggest however, their enforcement through a body of inspectors It seems necessary also to supplement the existing labour legislation with an enactment regulating labour conditions in mines on the lines of British Indian legislation As far as practicable the standards of labour legislation prevalent in British India should be adopted At present the State is the largest employer of industrial labour, on its railway, and it can

*Appendix I

†Khan Sahib M A. Kherie and Mr B G Bhattacharya dissent from the remainder of Section 21

set an example to private employees by the standards adopted there The Government of India in their Labour Department are working out a scheme for sickness insurance, and the scheme evolved might be considered for adoption in Jaipur—at least for the workers on the Jaipur State Railway For all labour employed on the railways or in government factories (including permanent servants of the government) some form of provident fund scheme should be made compulsory In the case of government servants the provident fund scheme may be offered as an alternative to the pension scheme which is at present in operation, besides being applied to those who are non pensionable We suggest also that commutation of a part of the pension, as in British India, may be made permissible

## SECTION E

### Public Health and Nutrition

#### A. Public Health

1 "It is an admitted fact that the conditions of life in rural areas generally are primitive, public health services are practically nil, medical aid is scanty, and the people are mostly illiterate, backward, conservative in ideas and economically very depressed "

In respect of public health much remains to be provided even in the towns, but conditions in the villages are much more serious Insanitation and illness cause poverty, and poverty leads to insanitation, illness misery and pauperism If any appreciable advance is to be made this vicious circle has to be broken

Clearly, a public health programme for rural areas is needed which must be simple, practical cheap and many sided, but not too ambitious or rigid in nature

Programme of Rural Health Measures

2 The programme suggested below refers only to the basic requirements for ensuring a reasonable standard of general health among the people in rural areas These are as follows —

1 Attention to general sanitation and hygiene
2 The supply of fresh and safe drinking water.

3 Provision of medical relief
4 Prevention of common infectious diseases
5 Education of the masses in public health

This covers a wide field, but our proposals touch only the most urgent needs

ilation & Hygiene

(a) Improvement in Housing Conditions

The chief aims in housing conditions must be to abate over crowding, secure adequate light and ventilation, avoid damp ness and achieve general cleanliness of the premises

There are in the main three aspects of the rural housing *problem* In the first place, there is the pressing problem of *the replacement* of houses which, judged by the most elementary standard of public health, are unfit for use Secondly, there are houses for which some simple and inexpensive improvements suited to local conditions and within the capacity of the people concerned may be devised Finally, *there is the question of improving the* layout of villages in cases where they are being moved or where new extensions are being laid out to remove congestion We may deal with these three aspects of the housing problem in turn

We have no definite information about the number of *houses* which may be classed as "unfit for use" We understand, however, that the number is very considerable, and that, in particular, there are a large number of mud houses built for temporary purposes which are quite unsuitable when rain is abnormal, as it was in Shekhawati last year We think it is adviseable to make an *annual* provision of one lakh of rupees for new rural housing This amount is not intended for the new extensions referred to later but merely for grant of materials, particularly tiles and timbers, to needy owners of houses unfit for use

So far as improvements in existing houses are concerned, experience elsewhere *supports* the view that they can be carried out at a very small *cost*, which is ordinarily within the capacity of the persons concerned The main improvements suggested are the introduction of windows suitable flooring, simple pit latrines and suitable cattle sheds. It may be

set an example to private employees by the standards adopted there The Government of India in their Labour Department are working out a scheme for sickness insurance, and the scheme evolved might be considered for adoption in Jaipur—at least for the workers on the Jaipur State Railway For all labour employed on the railways or in government factories (including permanent servants of the government) some form of provident fund scheme should be made compulsory In the case of government servants the provident fund scheme may be offered as an alternative to the pension scheme which is at present in operation, besides being applied to those who are non pensionable We suggest also that commutation of a part of the pension, as in British India, may be made permissible

## SECTION E

### Public Health and Nutrition

#### A. Public Health

1 "It is an admitted fact that the conditions of life in rural areas generally are primitive, public health services are practically nil, medical aid is scanty, and the people are mostly illiterate, backward, conservative in ideas and economically very depressed "

In respect of public health much remains to be provided even in the towns, but conditions in the villages are much more serious Insanitation and illness cause poverty, and poverty leads to insanitation, illness misery and pauperism If any appreciable advance is to be made this vicious circle has to be broken

Clearly, a public health programme for rural areas is needed which must be simple, practical, cheap and many sided, but not too ambitious or rigid in nature

Programme of Rural Health Measures

2 The programme suggested below refers only to the basic requirements for ensuring a reasonable standard of general health among the people in rural areas These are as follows —

1 Attention to general sanitation and hygiene
2 The supply of fresh and safe drinking water

3 Provision of medical relief
4 Prevention of common infectious diseases
5 Education of the masses in public health

*This covers a wide field*, but our proposals touch only the *most urgent needs*

...itation & Hygiene

The chief aims in housing conditions must be to abate overcrowding secure adequate light and ventilation, avoid dampness and achieve general cleanliness of the premises

(a) Improvement in Housing Conditions

There are in the main three aspects of the rural housing problem In the first place, there is the pressing problem of the replacement of houses which, judged by the most elementary standard of public health, are unfit for use Secondly, there are houses for which some simple and inexpensive improvements suited to local conditions and within the capacity of the people concerned may be devised Finally, there is the question of improving the layout of villages in cases where they are being moved or where new extensions are being laid out to remove congestion We may deal with these three aspects of the housing problem in turn

We have no definite information about the number of houses which may be classed as "unfit for use" We understand, however, that the number is very considerable, and that, in particular, there are a large number of mud houses built for temporary purposes which are quite unsuitable when rain is abnormal, as it was in Shekhawati last year We think it is advisable to make an annual provision of one lakh of rupees for new rural housing This amount is not intended for the new extensions referred to later but merely for grant of materials, particularly tiles and timbers, to needy owners of houses unfit for use

So far as improvements in existing houses are concerned, experience elsewhere supports the view that they can be carried out at a very small cost, which is ordinarily within the capacity of the persons concerned The main improvements suggested are the introduction of windows, suitable flooring simple pit latrines and suitable cattle sheds. It may be

necessary for this purpose to have a trained sanitary inspector in each tehsil to undertake the necessary propaganda amongst the people Such inspectors may be given other public health duties as well

Finally, we come to the question of laying out new villages and village extensions We understand that plans for type designs of rural houses and type layouts for new villages have already been prepared by the Chief Engineer for Irrigation for the villages affected by the recent floods We recommend that these designs should be enforced wherever possible When new housing is being undertaken and when new extensions are being planned, the Public Health Department should invariably be consulted in regard to the site and layout Where the villages are unable to finance the scheme, government grants should be available, and every reasonable concession in regard to the provision of land for this purpose free of taxation should be given

(b) The Collection Removal & Disposal of Village Refuse and other Wastes

3 The refuse consists of night soil, cattle dung, grass, hay, leaves of trees, rags paper, bodies of dead animals, etc An economical system of scavenging will have to be devised According to utility, such materials will have to be burnt buried periodically removed to the fields or stored in some remote corner and treated by some manuring process without creating a nuisance to other villagers From the public health point of view the burning of refuse is desirable being a sanitary method of disposal, but it deprives the agriculturist of a certain amount of manure which he values and requires for his crops Discretion has therefore to be exercised on this debatable point

(c) Supression of Nuisances

Common nuisances are pits excavations pools rank vegetation, dirty streets rat holes and the open air privy so much in vogue not only in villages but in every part of the country They give rise to flies mosquitos and rats These nuisances have to be eradicated by means of organized labour either voluntary or paid The actual method of eradication will consist of general clearance filling levelling and drainage In suitable places construction of bore hole latrines and flush

latrines with local septic tanks will reduce insanitation and the fly nuisance These may be used experimentally and as widely as possible

(d) Drainage

Arrangements must be made for the disposal of household sullage, large collections of water in pits and excavations during the rains, and waste well water Small drains, soakpits, or some kind of mechanical means of a manual nature may effect this

Water Supply

6 Attention will have to be paid to the following points —

1 The quality of the water
2 The quantity of the water
3 The safety and freshness of the water

The sources of drinking water in villages consist mainly of shallow wells, *karadis* and tanks, and, in certain places, springs

The quality of drinking water should be determined whenever possible by a chemical examination of samples In ordinary circumstances treatment may not be called for, but the examination of wells periodically is a precaution which should not be neglected Drinking water may be treated in the following ways —

1 Periodical cleaning
2 Repairing of well tops and providing proper plat forms and parapet walls
3 Proper disposal of waste well water
4 Frequent disinfection of water
5 Protection of well water from contamination from external and internal sources

Bathing washing of dirty utensils, leaves dust, and faecal droppings of animals constitute external contaminations, and the storage of large manure heaps in the near vicinity of the well is a source of internal contamination through soakage

The quantity of the drinking water supply can be increased in the following ways —

(a) New wells may be sunk and provided with pumps and with reservoirs to ensure freedom from contamination
(b) Old wells may be rebored or new tube wells may be put in.

necessary for this purpose to have a trained sanitary inspector in each tehsil to undertake the necessary propaganda amongst the people Such inspectors may be given other public health duties as well

Finally, we come to the question of laying out new villages and village extensions We understand that plans for type designs of rural houses and type layouts for new villages have already been prepared by the Chief Engineer for Irrigation for the villages affected by the recent floods We recommend that these designs should be enforced wherever possible When new housing is being undertaken and when new extensions are being planned, the Public Health Department should invariably be consulted in regard to the site and layout Where the villages are unable to finance the scheme, government grants should be available, and every reasonable concession in regard to the provision of land for this purpose free of taxation should be given

(b) The Collection Removal & Disposal of Village Refuse and other Wastes

3 The refuse consists of night soil, cattle dung, grass, hay, leaves of trees, rags paper, bodies of dead animals etc An economical system of scavenging will have to be devised According to utility, such materials will have to be burnt buried, periodically removed to the fields, or stored in some remote corner and treated by some manuring process without creating a nuisance to other villagers From the public health point of view the burning of refuse is desirable being a sanitary method of disposal, but it deprives the agriculturist of a certain amount of manure which he values and requires for his crops Discretion has therefore to be exercised on this debatable point

(c) Supression of Nuisances

Common nuisances are pits excavations pools rank vegetation, dirty streets rat holes and the open air privy so much in vogue not only in villages but in every part of the country They give rise to flies mosquitos and rats These nuisances have to be eradicated by means of organized labour either voluntary or paid The actual method of eradication will consist of general clearance, filling, levelling and drainage In suitable places construction of bore hole latrines and flush

latrines with local septic tanks will reduce insanitation and the fly nuisance These may be used experimentally and as widely as possible

Arrangements must be made for the disposal of household sullage, large collections of water in pits and excavations during the rains and waste well water Small drains, soakpits, or some kind of mechanical means of a manual nature may effect this (d) Drainage

6 Attention will have to be paid to the following points — Water Supply

1 The quality of the water
2 *The quantity of the water*
3 The safety and freshness of the water

The sources of drinking water in villages consist mainly of shallow wells *baradis* and tanks and in certain places, springs

The quality of drinking water should be determined when ever possible by a chemical examination of samples In ordinary circumstances treatment may not be called for, but the examination of wells periodically is a precaution which should not be neglected Drinking water may be treated in the following ways —

1 Periodical cleaning
2 Repairing of well tops and providing proper plat forms and parapet walls
3 Proper disposal of waste well water
4 Frequent disinfection of water
5 Protection of well water from contamination from external and internal sources

Bathing washing of dirty utensils, leaves dust, and faecal droppings of animals constitute external contaminations, and the storage of large manure heaps in the near vicinity of the well is a source of internal contamination through soakage

The quantity of the drinking water supply can be increased in the following ways —

(a) New wells may be sunk and provided with pumps and with reservoirs to ensure freedom from contamination
(b) Old wells may be rebored or new tube wells may be put in.

(c) Local dams may have to be constructed if the subsoil level of the water has gone down

The choice of methods will depend upon funds and local circumstances The supply of safe water from *baradis* is problematic and difficult to arrange for unless the expense of mechanical power is not objected to From springs the water may be delivered by means of pipes from a reservoir, and the spring should be protected It should be remembered that a piped water supply without adequate arrangements for drainage is often a source of malarial infection

The needs and difficulties of the depressed classes should be specially kept in view

7. The subject of medical relief for the villager is a problem of special difficulty Dispensaries are few and inadequate Even now in certain cases the distance between dispensaries is more than 45 miles It may be noted that there is no dispensary between Sanganer and Malpura, which are 47 miles apart Similarly there is no dispensary between Amber and Pawata or Bairath, which are separated by about the same distance In many villages even vaids and hakims are not found In a brief report like this it is possible only to mention some of the means by which medical relief can be given to the villager These are —

1 Dissemination of the knowledge of the application and use of local drugs where possible
2 Provision of medical chests in certain villages where educated persons reside These can be entrusted with the task of distributing medicines according to instructions
3 Subsidization of indigenous system of medicine within limits
4 Distribution of selected medicines through the sanitary staff
5 Occasional touring by medical officers of the dispensaries
6. Provision of travelling dispensaries
7 Establishment of hospitals and dispensaries
8 Hospitalization of existing dispensaries

The indigenous systems of medicine, Unani and Ayurvedic, whatever be their shortcomings, have the confidence of the villager, and their inexpensiveness is an attraction to him Further, it is only from a vaid or hakim that most villagers at present can obtain medical help within a reasonable distance of their houses It is suggested, therefore, that Government might consider the licensing and employment of vaids and hakims

Travelling dispensaries are expensive to maintain, and their utility is limited by the poor means of communication They are well suited for the provision of medical aid in an emergency, in accessible places

The hospitalization of dispensaries and the establishment of new hospitals and dispensaries is most necessary Every nizamat, indeed every tehsil, should have a hospital if possible And the distribution of both hospitals and dispensaries should follow a carefully considered plan

8 An immediately practicable method of providing medical relief for the villages seems to be this—that medical officers of the dispensaries should tour on weekly market days in a prearranged area People from surrounding villages could come to get the necessary medical help, including prophylaxis By these weekly tours the officer will be able to supply medical help to 20 30 villages a month In a year he may be able to serve every village of the district He will save many from the couchers' and from the financial burden of a journey to Jaipur Medical relief should not be the special privilege of the tehsil town people, the villagers also can expect such help Medical officers would have to be remunerated suitably for this extra service The objection may be raised that they have enough work to do at the dispensary, and their work there would suffer by such touring But in reality it would be lightened No great outfit is required The common ailments in villages are fevers (malaria, pneumonia and typhoid), measles small pox, diarrhoea, dysentery, eye trouble, eczema, ringworm, bad teeth, anaemia and asthma Tuberculosis and leprosy are found but only occasionally Weekly Touring by Medical Officers.

Midwifery and Maternity

9 Whenever possible a midwife should be attached to each of the dispensaries

In selected areas it may be advisable to appoint public health nurses who would receive adequate training in all aspects of public health and in particular, in propaganda

Women teachers in village schools may when possible, be given training in hygiene and maternity work

The problem of inducing village *dais* to adopt more cleanly methods is a very urgent one

Notifiable Diseases

10 The outbreaks of notifiable disease are fewer now than a couple of decades ago It is however, essential to check the spread of an infectious disease as soon as the outbreak occurs The following recommendations are made by which prompt control of epidemic diseases could be effected —

(a) Rules should be enacted for the compulsory notification to the Director of Public Health of an infectious disease or any other condition associated with an abnormal number of deaths so that he can take immediate action

(b) Vital statistics from the district must reach the Director of Public Health regularly every month

It is understood that rules in this connection have been drafted by the Director of Public Health There must be such an agency as will ensure prompt and accurate reports

(c) Extension of the health services and employment of additional sanitary staff is necessary

(d) There should be a travelling Health Dispensary for prompt anti-epidemic measures Sanitary training should be given to revenue officials (naib tahsildars, kanungos girdawars patwaris) who have frequent occasion to visit the villages

(e) Appliances for the destruction of pests should be provided

(f) The patels ought to be literate

(g) The services of teachers may be utilized in spreading knowledge of hygiene and training in first aid may be arranged for them at the headquarters hospital

Hygiene Publicity Work

11 The *importance* of hygiene publicity work has been emphasized This kind of work has to be fully systematized

and made efficient and educative The following recommendations are made —

(a) The publicity staff should form part of the staff of the touring public health dispensary

(b) Modern appliances for educating the public should be provided and handbills and personal talks should be made available

(c) Health exhibitions may be held occasionally in different parts of the State

(d) Closer collaboration of school teachers with the health services is desirable

12 It is understood that it is the intention of Government to set up punchayats in rural areas Such punchayats, or small town committees, would be able to undertake many of the activities suggested — Rural Punchayats

13 A sanitary code might be drawn up for the guidance of the punchayat and they might be authorized to levy a sanitation tax to meet the cost of ordinary municipal services State grants may be allotted for such works as are necessary but beyond the scope of the punchayat

14 Public health work is many sided and involves co-operation of the various departments of Government with each other and with the people Team work is essential, and there is wide scope for co operative effort of a voluntary nature

Villages which co operate and carry out the instructions of departmental officers should have preference in the allotment of grants for works which cannot normally be carried out by them If the revenue authorities could arrange that the patwaris and the patels took an active interest in the organization of health work the effect would be excellent

The closest co ordination of the work of the medical and public health departments is essential for the successful carrying out of such measures as we have suggested

## B Nutrition

1 Although the problem of nutrition in Jaipur may have features peculiar to itself, it is difficult to obtain a clear idea of them because no special study has so far been attempted — Nature of the Nutrition Problem—General.

and accurate data are not available. The problem is much the same in its fundamentals as in the rest of India. In Indian dietaries the following features are generally observed. Firstly, the population, taken as a whole, is suffering from a serious under-consumption in a quantitative sense. Secondly, there is a want of balance from the point of view of nutritional requirements. There is a preponderance of carbohydrates and a considerable under-consumption of protective foods like vegetables and fruits and sources of mineral and fat, due *largely to their non-availability at prices which people c n* afford. The consumption of protein-yielding foods like pulses, meat, milk and milk products is also very much below elementary needs. Of course, in respect of these deficiencies there are considerable variations between different parts of India, the diet in some parts of the country being far worse than in others. According to Dr. McCarrison, the people of Rajputana and those of the Punjab and the North-West Frontier belong to the more vigorous classes, and nutritional problems here differ somewhat from those in South India Nevertheless it may be presumed that here, as well as elsewhere, there is deficiency in respect of both quantity and quality of food, and something can certainly be done to rectify this by a carefully planned food policy.

The Problem in Jaipur

2 The chief characteristics of the food generally consumed in the State are as follows The bulk of the population subsists on *bajra*, *barley* and *jowar* Wheat is used by those who are fairly well off The poorest sometimes use inferior grains like *macca* In winter, *bajra* is consumed in place of barley. There is very little consumption, particularly in the diets of the poor people, of vegetables and fruits Vegetables are not available even in some of the towns Fruits are mostly imported from outside and are, therefore, unobtainable except by fairly well to do people Even fruits which can be grown easily, like the *papeeta*, are little grown, and sell in the market at rates well above the reach of the ordinary consumer. Citrus fruits and important vitamin bearing fruits like the *amla* are conspicuously absent except in a few favoured spots The

production of milk is fairly large, but its common utilization in making mawa to serve as a base for sweets is a comparatively wasteful use from the nutritional point of view

Potatoes are mostly imported, and except for two or three months in the year their price is prohibitive for the poorer consumers

3 In view of these facts we consider that attention may particularly be given to the following measures and such others as may increase the general availability of the foods that are mentioned — Proposals for Food Planning

This, of course, is not to suggest that it will be possible to provide at once an abundance of properly balanced food for the entire population of the State But within the next few years, with a suitable system of crop planning and a well thought out plan for obtaining nutritional requirements, more good food can certainly be provided than is at present available A high gree of self sufficiency in food may be achieved with the d of a long term food policy

(a) An attempt should be made to obtain larger quantities of wheat to supplement barley and *jowar*, if possible by undertaking the cultivation of wheat on lands which are to be brought under cultivation under the post war development schemes, or by any other methods that may be suggested by the Department of Agri culture — Cereals

(b) It is desirable also to increase the cultivation of potatoes in the State because the potato as a source of carbohyrates, is considered to be superior to wheat, and increased potato consumption is desirable Messrs Orr and Lubbock, in their recent book on Feeding the People in War Time , express the view that the potato is of special value for health An acre of potatoes gives twice as much food as an acre of wheat It is the surest first crop off ploughed up pasture ' In his book on ' Food Planning for Four Hundred Millions', Dr Radha Kamal Mukerjee writes "Protein wastage in the dietary due to the formation of ammonia for ... could be effectively ... quate quantities of ... as potatoes, radishes, — Potato Cultivation

and accurate data are not available The problem is much the same in its fundamentals as in the rest of India In Indian dietaries the following features are generally observed Firstly, the population, taken as a whole, is suffering from a serious under consumption in a quantitative sense Secondly, there is a want of balance from the point of view of nutritional requirements There is a preponderance of carbohydrates and a considerable under consumption of protective foods like vegetables and fruits and sources of mineral and fat, due largely to their non availability at prices which people can afford The consumption of protein yielding foods like pulses, meat, milk and milk products is also very much below elementary needs Of course, in respect of these deficiencies there are considerable variations between different parts of India, the diet in some parts of the country being far worse than in others According to Dr McCarrison, the people of Rajputana and those of the Punjab and the North West Frontier belong to the more vigorous classes, and nutritional problems here differ somewhat from those in South India Nevertheless it may be presumed that here, as well as elsewhere, there is deficiency in respect of both quantity and quality of food and something can certainly be done to rectify this by a carefully planned food policy

The Problem in Jaipur

2 The chief characteristics of the food generally consumed in the State are as follows The bulk of the population subsists on *bajra*, *barley* and *jowar* Wheat is used by those who are fairly well off The poorest sometimes use inferior grains like *macca* In winter, *bajra* is consumed in place of barley There is very little consumption particularly in the diets of the poor people, of vegetables and fruits Vegetables are not available even in some of the towns Fruits are mostly imported from outside and are therefore unobtainable except by fairly well to do people Even fruits which can be grown easily, like the *papeeta* are little grown, and sell in the market at rates well above the reach of the ordinary consumer Citrus fruits and important vitamin bearing fruits like the *amla* are conspicuously absent except in a few favoured spots The

between different seasons and also between differen' towns and villages

We recommend that any possible measures should be taken to prevent adulteration of animal ghee with vegetable oils

( ) The cultivation of fruits should receive particular attention The planting of fruit gardens will not be undertaken in the absence of security of tenure, and improvement in this matter seems to be urgently necessary The planting of orchards should be encouraged by every available m[illegible] the grant [illegible] supply of expert horticultural assistance — Fruits

Special attention should be given [illegible] tion of the papeta and [illegible] where ever [illegible] ping may be w[illegible] as a subsidiary industry

(f) The cultivation of vegetables should be specially increased Dr Aykroyd made the suggestion that gardening in rural schools and other public institutions should be encouraged If it is practicable each rural school may be supplied with some 10 or 20 bighas of free land where cultivation of vegetables may be undertaken as a part of the school work It has been pointed out to us that the villagers' lack of vegetables is due not merely to their scarcity but also to want of taste for them and ignorance of their diet value The cultivation of vegetables in schools may be helpful in rectifying this particularly if these products are occasionally distributed free to the villagers through the children We also suggest that specially cheap rates may be allowed by the State Railway for the transport of vegetables to different areas Again the dehydration process has come to stay as an agricultural industry and may be developed here Vegetables produced in large quantities during the favourable seasons could perhaps be stored in a dehydrated condition for other seasons The possibilities in this direction should be carefully studied, and the advice of the experts now being sent to India might be obtained — Vegetables

4 To execute these schemes of nutritional planning the Government should have a long period food policy and if possible a Food Department the main preoccupation of which — Wanted a Food Policy and a Food Department

are not only rich in carbohydrate but also in alkali, Vitamin C and iron " Experiments made in the Punjab in growing various Scotch kinds of potato have yielded excellent results Besides potatoes, root vegetables like radishes and beetroot may be grown more extensively, particularly because these can be grown in this soil fairly easily

Pulses the Soya Bean

(c) Pulses are of great importance as source of protein In this locality the bulk of the population is vegetarian According to Dr Aykroyd, the consumption of pulses in India should increase by about a hundred per cent This can be taken as applying to our State The possibilities of a wide extension of leguminous cultivation interspersed with other crops, and of the further use of ground nut as a food, may be considered It may also be investigated whether the cultivation of the soya bean can be undertaken The soya bean is sometimes described as the wonder crop of the age Its food values are enormous, because it is not only an excellent source of protein and fat but also an excellent substitute for milk and milk products The range of by-products in this case is incredibly large and would make possible the development of a large number of subsidiary manufacturing processes In the U S A this has become a multi million dollar industry If it is found possible to cultivate this bean the starting of manufacturing processes should be planned simultaneously We are the more hopeful because the soya bean is a hardy plant thriving even on poor soil, and experiments made in cultivating it in Sind are reported to have been extremely favourable

*Milk and Milk Products*

(d) In regard to milk and milk products it is necessary *that a much larger production should be planned*, and milk should be available in much larger quantities in both villages and towns But it is also necessary to plan a more proper utilization of the available supply It should be possible to develop areas which are now ' *culturable waste* as good fodder areas and *dairy*ing as a modern industry subsidiary to agriculture should be undertaken with the assistance of the State The possibility of developing a condensed milk and milk powder industry may be investigated In India there is an excellent market for both these products , but such production has value also from the point of view of local needs since there is considerable variation in the quantities of market supply

villages mentioned in the appendix have schools now. To day the Trust has as many as 238 schools in the State of Jaipur, it is intended to add 100 more to this number during the u e of the year"

Thus within a year there will, it is hoped, be a school than three miles of every village We think, however, that en three miles is too far for small children to go, and should e two miles to be the limit of distance Further this immediate plan, while bringing schools near to all villages, provides for only a tiny fraction of the number who, under a system of universal education, would attend We now consider the problem of the provision necessary for universal primary education

The total population of the State according to the census of 1941 is 30,40,876 and the number of children between the ages of 5 and 10 is given as 4,38,986, and of those between 10 and 15 as 3,54,551 We may perhaps take the primary schoolgoing population as approximately 5,00,000 The total number now receiving instruction in primary schools is 24,279, and in *chatsalas* and *maktabs* 11 110, a total of about 35,000 This amounts to only 7 per cent of the primary schoolgoing population on the estimate made above

The total number of primary school is 481, and there are 373 *chatsalas* and *maktabs*, the average attendance per school being 43 If on this basis we make provision for the remaining primary schoolgoing population, we shall need nearly 11,000 more schools Actually, however, some schools could be converted into double teacher schools, and 10,000 additional schools would probably meet practically all requirements This would be a convenient figure to work with provisionally

If we assume that the average cost of building a school is Rs 1,000 then the total building cost of new schools would be Rs 1 crore If we assume further that the recurring cost of a single teacher is Rs 300, the recurring cost of the additional schools will amount to Rs 30 lakhs If there were two teacher schools, the cost would probably be in the neighbourhood of Rs 53 lakhs It is the opinion of the Committee that

would be (a) to encourage coordination between the Health, Revenue and Agriculture Departments, (b) to propagate ideas about proper diet, and (c) to plan suitable measures for the control of consumption, if necessary

Future Study and Propaganda

A detailed study of the dietetic conditions by nutritional experts may be arranged for from time to time Suitable schemes of diet appropriate to different classes of people should be worked out through the State Health Department, and information concerning these should be given in small pamphlets in the local languages, and widely distributed to the public

## SECTION F

### Education

#### (1) Elementary Education

It is desirable that elementary education should be made universal throughout the State Financially, this is made easier in Jaipur State by the immense extent of private munificence The disposition of the schools should be carefully planned upon a geographical study of the whole State, and in such a way that the children of no village shall have more than two miles to travel to school A note from Captain Pande shows that the problem of making primary education accessible to all is already being dealt with energetically in the State The Birla Education Trust," writes Captain Pande, "which at present controls the largest number of village schools run in the State, conducted an educational survey of the State The aim it placed before itself was to have a school within three miles of every village From all the information it could procure from the list of schools published by the State and from reports of unofficial agencies, it was found that if the State had schools in the villages given in the Appendix*, barring the hilly tracts, where villages are too far apart from one another, the aim outlined by the Trust would be achieved The Trust has launched its programme of opening of schools and 150 of the

*See Appendix J

villages mentioned in the appendix have schools now. To-day the Trust has as many as 238 schools in the State of Jaipur, and it is intended to add 100 more to this number during the course of the year"

Thus within a year there will, it is hoped, be a school within three miles of every village We think, however, that even three miles is too far for small children to go, and should like two miles to be the limit of distance. Further this immediate plan, while bringing schools near to all villages, provides for only a tiny fraction of the number who, under a system of universal education, would attend We now consider the problem of the provision necessary for universal primary education

The total population of the State according to the census of 1941 is 30,40,876 and the number of children between the ages of 5 and 10 is given as 4 38 986, and of those between 10 and 15 as 3,54 551 We may perhaps take the primary schoolgoing population as approximately 5,00,000 The total number now receiving instruction in primary schools is 24,279, and in *chatsalas* and *muktabs* 11,110, a total of about 35,000 This amounts to only 7 per cent of the primary schoolgoing population on the estimate made above

The total number of primary school is 481, and there are 373 *chatsalas* and *muktabs*, the average attendance per school being 43 If on this basis we make provision for the remaining primary schoolgoing population, we shall need nearly 11,000 more schools Actually, however, some schools could be converted into double teacher schools, and 10 000 additional schools would probably meet practically all requirements This would be a convenient figure to work with provisionally

If we assume that the average cost of building a school is Rs 1 000 then the total building cost of new schools would be Rs 1 crore If we assume further that the recurring cost of a single teacher is Rs 300, the recurring cost of the additional schools will amount to Rs 30 lakhs If there were two teacher schools the cost would probably be in the neighbourhood of Rs 55 lakhs It is the opinion of the Committee that

all new schools should be double or multiple teacher schools and provision should, therefore, be made for the latter figure

It will be clear from these figures that universal primary education in this State is not an immediate practicable possibility A twenty five year plan is, therefore proposed with the object of providing the required number of schools by the end of that period This would involve the setting up of 400 additional schools every year with an annual capital expenditure of Rs 4 lakhs The recurring cost would rise by 2 2 lakhs every year We recommend the levy of an education cess both in Khalsa and Non Khalsa areas, and consider that the receipts under this head may be estimated at Rs 15 lakhs With the proceeds of the education cess and aided by private munificence, we consider that the State should be able to finance a scheme on these lines

There can be no doubt that the provision of additional facilities for education is one of the most urgent problems facing the State The present figure of literacy in the whole State is 5 3 per cent literacy among males being 9 4 per cent, and among women only 85 per cent The total number of literate people in a population of over 30 lakhs is only 1 62 000 It is clear that if any substantial progress is to be made education must be given a foremost place Hence the proposal to introduce universal primary education in a twenty five year period

Everything possible should be done to secure the willing co operation of parents By propaganda both official and unofficial they should be shown that the advantages of education to their children far more than compensate for their own inconvenience and that the benefit is lost if the children do not remain at school for the full primary course There should be such provision for girls education as will overcome the scruples of parents It would be an immense advantage from every point of view if one free meal a day could be provided Perhaps private generosity could make such provision by endowment The expense would be great but we would particularly emphasize the fact that money could be

spent in no more profitable way The physical and mental effect of having proper food at least once a day throughout the years of childhood is incalculable Then there is the reconciling effect upon parents, and finally the opportunity of setting an example in properly nutritive diet Another question to be considered in many places is that of free conveyance

The education given should, we think, be closely related to daily life, in respect both of domestic and social environment and of village occupations Even very young children can get proper ideas about hygiene and sanitation and antipest measures and so on permanently fixed in their minds This is already part of the Jaipur curriculum for primary schools And even at the primary stage much can be taught about right conduct and relations between neighbours As for occupational or craft training it seems desirable to continue to experiment in selected schools with the principle involved in the "basic" method a craft being studied not necessarily in preparation for practising it but in such a way as to train the physical and mental faculties of the pupil and also to lead through the single craft to various branches of knowledge and action related to it This is a method which is useless and wasteful unless it has been carefully studied Not every teacher can cope with it even after training The experiment should therefore be on a small scale and the teachers so selected as to give the experiment a fair chance It is pointed out in Captain Pande's note that one reason for the frequent lapsing into illiteracy of those who have had primary school education is that what they have been given to read at school has not stimulated an interest in the world around them which they will want to go on satisfying The Birla Educational Trust is bringing out six reading books suited to six classes and ages in primary schools and consisting of lessons on all the subjects which should be studied There will be lessons, says Captain Pande, in every day science agriculture [illegible] tion [illegible]

[illegible]

all new schools should be double or multiple teacher schools and provision should, therefore, be made for the latter figure

It will be clear from these figures that universal primary education in this State is not an immediate practicable possibility A twenty five year plan is, therefore, proposed with the object of providing the required number of schools by the end of that period This would involve the setting up of 400 additional schools every year with an annual capital expenditure of Rs 4 lakhs The recurring cost would rise by 2 2 lakhs every year We recommend the levy of an education cess both in Khalsa and Non Khalsa areas, and consider that the receipts under this head may be estimated at Rs 16 lakhs With the proceeds of the education cess and aided by private munificence, we consider that the State should be able to finance a scheme on these lines

There can be no doubt that the provision of additional facilities for education is one of the most urgent problem facing the State The present figure of literacy in the whole State is 5 3 per cent, literacy among males being 9 4 per cent, and among women only 85 per cent The total number of literate people in a population of over 30 lakhs is only 1,02,000 It is clear that if any substantial progress is to be made education must be given a foremost place Hence the proposal to introduce universal primary education in a twenty-five year period

Everything possible should be done to secure the willing co operation of parents By propaganda both official and unofficial they should be shown that the advantages of education to their children far more than compensate for their own inconvenience and that the benefit is lost if the children do not remain at school for the full primary course There should be such provision for girls' education as will overcome the scruples of parents It would be an immense advantage, from every point of view, if one free meal a day could be provided Perhaps private generosity could make such provision by endowment The expense would be great, but we would particularly emphasize the fact that money could be

literary work were published by Government, since this would ensure an exact conformity to needs and would be economical.

The most obvious scheme in adult education is that of evening or day classes, throughout the cold weather, for those whose school education has been cut short They should be held in schools, by teachers who would receive an honorarium, and their range of subjects would be almost as wide as the school curriculum In connection with the Rural Development Scheme, adult schools were opened in a large number of Jaipur villages in 1939, and a revised and detailed scheme for special adult schools in villages is before the Rural Development Board It is unnecessary for us to duplicate the Board's discussion of this matter But we should like to make two suggestions (1) When an adult school is established in a village, it would not be right, by limitation of the size of classes, to exclude any one who desires to learn and is prepared to attend regularly This would have a disastrous effect on the people's minds If the classes become too large it is imperative that supplemental arrangements should be made Nor should there be an age limit, provided the person is fit for education (2) However great the importance of adult education, it should in no case be given preference to the universalizing of children's education at the primary stage, and after measures to maintain and enlarge the knowledge thus gained The extension of primary education is superior in importance to every other educational development whatsoever

It is necessary that training in adult education should be given to every teacher in his training course He should, further, receive in this course a special preparation for the general leadership which will be increasingly expected of him in a village

It is desirable that all large employers of labour should conduct adult schools for the education of the employees in their factories or other concerns

In Jaipur City the extension lecturing begun by the staff of the Maharaja's College should be developed, and in towns through-

world affairs, etc The children, while learning the language through the book, will simultaneously get instruction in subjects which are taught to them at present as separate subjects through books which are not interesting reading "

Instruction by means of slides, films and radio might be systematized and greatly extended

It is necessary to raise the salaries, and thus the status, of teachers in elementary schools, in order to improve the efficiency of teaching by making the profession attractive to better equipped persons and relieving them of acute personal anxiety and hardship

Every teacher should be trained, and untrained teachers in service, whether government or private, should be deputed for training as early as possible

## (2) Literacy and Adult Education

We suggest that a thoroughly representative State Literacy Council might be formed, and entrusted with the planning and supervising of a scheme to bring about universal literacy in the State It is indeed worthy of consideration whether the whole scheme of adult education might not best be entrusted to such a body In every sphere unofficial co operation is to be encouraged Moreover there is a tendency to respond more readily to a movement that in plan and operation is largely unofficial Again, the extent of private educational munificence in the State gives point to this proposal

In the towns much of the literacy work can be done by the students and schoolboys In villages the work might be entrusted to the village schoolmaster a bonus being given him for each person made literate This would not result in anything like universal literacy but it might be a very useful beginning and could at first be tried in selected villages

It is necessary also to see that literacy, once acquired is not lost An arrangement might be made for continued guidance by the village teacher There should be in each village a library of simple books in the vernaculars It would be well if both these books and the books required in the

literacy work were published by Government, since this would ensure an exact conformity to needs and would be economical

The most obvious scheme in adult education is that of evening or day classes, throughout the cold weather, for those whose school education has been cut short They should be held in schools, by teachers who would receive an honorarium and their range of subjects would be almost as wide as the school curriculum In connection with the Rural Development Scheme, adult schools were opened in a large number of Jaipur villages in 1930, and a revised and detailed scheme for special adult schools in villages is before the Rural Development Board It is unnecessary for us to duplicate the Board's discussion of this matter But we should like to make two suggestions (1) When an adult school is established in a village it would not be right, by limitation of the size of classes, to exclude any one who desires to learn and is prepared to attend regularly This would have a disastrous effect on the people's minds If the classes become too large it is imperative that supplemental arrangements should be made Nor should there be an age limit, provided the person is fit for education (2) However great the importance of adult education, it should in no case be given preference to the universalizing of children's education at the primary stage and after measures to maintain and enlarge the knowledge thus gained The extension of primary education is superior in importance to every other educational development whatever

It is necessary that training in adult education should be given to every teacher in his training course He should, further receive in this course a special preparation for the general leadership which will be increasingly expected of him in a village

It is desirable that all large employers of labour should [illegible] adult schools for the education of the employees in their factories or other concerns

In Jaipur City the extension lecturing begun by the staff of the Maharaja's College should be developed, and in towns through-

world affairs, etc The children, while learning the language through the book, will simultaneously get instruction in subjects which are taught to them at present as separate subjects through books which are not interesting reading "

Instruction by means of slides, films and radio might be systematized and greatly extended

It is necessary to raise the salaries, and thus the status, of teachers in elementary schools, in order to improve the efficiency of teaching by making the profession attractive to better equipped persons and relieving them of acute personal anxiety and hardship

Every teacher should be trained, and untrained teachers in service, whether government or private, should be deputed for training as early as possible

(2) Literacy and Adult Education

We suggest that a thoroughly representative State Literacy Council might be formed, and entrusted with the planning and supervising of a scheme to bring about universal literacy in the State It is indeed worthy of consideration whether the whole scheme of adult education might not best be entrusted to such a body In every sphere unofficial co operation is to be encouraged Moreover there is a tendency to respond more readily to a movement that in plan and operation is largely *unofficial Again, the extent of private educational munificence* in the State gives point to this proposal

In the towns much of the literacy work can be done by the students and schoolboys In villages the work might be entrusted to the village schoolmaster a bonus being given him for each person made literate This would not result in anything like universal literacy but it might be a very useful beginning, and could at first be tried in selected villages

It is necessary also to see that literacy, once acquired is not lost An arrangement might be made for continued guidance by the village teacher There should be in each village a library of simple books in the vernaculars It would be well if both these books and the books required in the

the course should in itself provide a good all round education, and there should be revision with this end in view This course, even if it admits a certain amount of choice, should in the main be uniform There are still some who imagine that at the fourth form stage a pupil can be expected to decide whether he is going to the university, and even what course he will take there and that he should make choice of school optionals accordingly There should be no such 'specialising" at the school stage We consider that the high school course and examination should be such that the pupil will be free at the next stage to take any course for which he is fitted by ability without dependence on prior special study at school

(4) University Education

Both in Jaipur and elsewhere the reconstruction of university education is an urgent question, since its present content and methods are but little suited to the production of well informed self reliant and effective citizens

Admission should we think be restricted to those who can profit by university education This restriction should be accomplished partly by adopting a high standard of admission In some provinces the matriculation certificate is regularly awarded to candidates who are ridiculously unfit for higher study and perhaps nowhere is the standard of admission what it should be Another means of restriction is to cease to give preference to graduates in filling ordinary clerical appointments which should rather be filled by competitive examination based on a special course of office training To this course, and to other diploma courses commercial technical and so on, many should be diverted on the conclusion of their high school course or earlier Such courses following on the high school examination might well be conducted by the University, and a university diploma might be given Persons who are not well suited to degree courses will more willingly forego them if they can thus obtain a different sort of recognition by the university, and the courses and examinations can perhaps best be controlled by the university

out the State such lectures might be delivered regularly by visiting lecturers from the colleges and by others This work might be under the control of the Maharaja's College Extension Lectures Committee Extension lecturing would continue to be honorary work It should have a wide range, varying with audience and subject There may be scholarly lectures, in English or Hindustani, and very simple ones in Hindustani for those with little education For the latter, films and slides should frequently be used Distinguished visitors should be invited to give lectures of the former type in Jaipur, and if possible in other towns

The camp system in which a group of members of the college staff remain for a week or so in a moffusil place, giving talks and demonstrations and becoming intimate with the people, may be tried It has been extremely successful in Mysore This work may be shared by school teachers and others Suitable lectures or series of lectures should afterwards be published by Government, in Urdu and Hindi

Regular courses for educated people in particular subjects, might be tried They would be held in the mornings or the evenings Those enrolled would pay a fee and their study would be supervised The lecturers would receive an honorarium For such classes there is a very great demand in Europe but here it might be necessary to stimulate the demand by issuing and recognizing a certificate of proficiency

In Scandinavia there is an extremely successful system by which employees of Government and of firms are deputed for a period of some months to attend classes in subjects related to their professional work and thus increase their efficiency This also is worthy of consideration

(3) High School Education

We agree with the prevalent view that there should be a single high school course, intended both for those who will ultimately go the university and those who will not , and that

respect of both knowledge and mental discipline They will have learnt a way of thought and life which will lead to happiness and usefulness; and they must in all ways be well equipped for citizenship We suggest means towards this end Owing to the specialization of honours students they will not be able to devote to this training so much time as the pass men, but it is possible in various ways to include them in its benefits and this is particularly desirable for honours students of science

(c) It may seem strange nowadays, when the present university education is so widely condemned as too "bookish" and "literary", to propose that a good deal of time—more than at present—should be spent by every student, arts or science, on the study of literature (partly, but not entirely, English literature) There are many, however, who realise that "know thyself" (and know human nature, with the deepest possible insight and sympathy) is still the paramount aim of education, and that of this—and much else—literature is the best teacher, besides its value as giving the most worthy sort of delight The plan, however, must be that of fairly wide reading, within the student's range, and must aim at enjoyment and intelligent appreciation, not annotation or summarising or the parrot use of critical terms There is no student who cannot profit greatly by such a study, rightly directed Much depends on the plan, but more on the teacher, who must be chosen for his intelligence, not for distinction secured by the cramming of jargon

(d) [illegible] citizen [illegible] than, [illegible] The [illegible] occupy a [illegible] of leadership (some in a very high sense, but all in an important sense) in the critical years of reconstruction. They will have to meet, and should be able to help in solving, the various problems, and it is their extremely responsible duty to gain and to disseminate accurate information regarding these and give guidance to the general thought Those who become teachers, in particular, will have a great responsibility to their pupils in these matters The problems can be classified as political, economic, industrial, social, and so on, but all are interrelated,

It is the general view throughout India that the B A or B Sc course, whether pass or honours, should be a continuous three years course, but that this is *impossible until there has* been a complete reorganization of high school education and an extension of it to include an extra year, which is now the junior intermediate year We agree as to the three years course, but consider that, for the present at least, that year should be taken in college, as a year of special preparation for the university course, under the instruction of the college staff, and under college conditions of life and work This is a year, intermediate between school and college, of which the greatest use can be made The student, who will as a rule have studied up to this point through his vernacular, will now use the English medium, and by this practice, and by special instruction in the language, will become fit for a satis factory use of this medium when, in the following year, he begins his university course proper He will also at this stage be given some instruction in subjects pertaining to citizenship But, besides, the work of this preliminary year, and the exami nation concluding it, will include subjects preparatory to a specific university course A beginning in specialization will be made and the student s fitness for this will be tested and there will be decision also as to which students are fit for honours studies

Thus, not only is there no need to delay the introduction of the three years degree course until school education has been reorganized and extended but there are very great advantages in having this preliminary year in college.

We are inclined to think that there should be separate honours courses not simply the obtaining of honours by distinction in pass papers and in some extra papers As was emphasised by the Calcutta University Commission students of outstanding ability are handicapped by being made to proceed through the *pass course at the speed and with the scope suited* to pass men

In the training of both pass and honours students it must be the purpose *of the university to produce really educated men*

in respect of both knowledge and mental discipline They should have learnt a way of thought and life which will lead to happiness and usefulness, and they must in all ways be well equipped for citizenship We suggest means towards this end Owing to the specialization of honours students they will not be able to devote to this training so much time as the pass men, but it is possible in various ways to include them in its benefits, and this is particularly desirable for honours students of science

(a) It may seem strange nowadays, when the present university education is so widely condemned as too "bookish and 'literary", to propose that a good deal of time—more than at present—should be spent by every student, arts or science, on the study of literature (partly, but not entirely, English literature) There are many, however, who realise that "know thyself" (and know human nature, with the deepest possible insight and sympathy) is still the paramount aim of education, and that of this—and much else—literature is the best teacher, besides its value as giving the most worthy sort of delight The plan, however, must be that of fairly wide reading, within the student's range, and must aim at enjoyment and intelligent appreciation, not annotation or summarising or the parrot use of critical terms There is no student who cannot profit greatly by such a study, rightly directed Much depends on the plan, but more on the teacher, who must be chosen for his intelligence, not for distinction secured by the cramming of jargon

(b) Education for citizenship [illegible] ship must go far b[illegible] the present cour[illegible], graduates of the [illegible] will occupy a position of leadership (some in a very high sense, but all in an important sense) in the critical years of reconstruction They will have to meet, and should be able to help in solving the various problems, and it is their extremely responsible duty to gain and to disseminate accurate information regarding these and give guidance to the general thought Those who become teachers, in particular, will have a great responsibility to their pupils in these matters The problems can be classified as political, economic, industrial social, and so on, but all are interrelated,

It is the general view throughout India that the B A or B Sc course, whether pass or honours, should be a continuous three years course, but that this is impossible until there has been a complete reorganization of high school education and an extension of it to include an extra year, which is now the junior intermediate year We agree as to the three years course, but consider that, for the present at least, that year should be taken in college, as a year of special preparation for the university course, under the instruction of the college staff, and under college conditions of life and work This is a year, intermediate between school and college, of which the greatest use can be made The student, who will as a rule have studied up to this point through his vernacular, will now use the English medium, and by this practice, and by special instruction in the language, will become fit for a satisfactory use of this medium when, in the following year, he begins his university course proper He will also at this stage be given some instruction in subjects pertaining to citizenship But, besides, the work of this preliminary year, and the examination concluding it, will include subjects preparatory to a specific university course A beginning in specialization will be made, and the student's fitness for this will be tested and there will be decision also as to which students are fit for honours studies

Thus, not only is there no need to delay the introduction of the three years degree course until school education has been reorganized and extended but there are very great advantages in having this preliminary year in college

We are inclined to think that there should be separate honours courses not simply the obtaining of honours by distinction in pass papers and in some extra papers As was emphasised by the Calcutta University Commission, students of outstanding ability are handicapped by being made to proceed through the pass course at the speed and with the scope suited to pass men

In the training of both pass and honours students it must be the purpose of the university to produce really educated men

in respect of both knowledge and mental discipline They should have learnt a way of thought and life which will lead to happiness and usefulness, and they must in all ways be well equipped for citizenship We suggest means towards this end. Owing to the specialization of honours students they will not be able to devote to this training so much time as the pass men but it is possible in various ways to include them in its benefits and this is particularly desirable for honours students of science

(a) It may seem strange nowadays, when the present university education is so widely condemned as too 'bookish and 'literary, to propose that a good deal of time—more than at present—should be spent by every student, arts or science, on the study of literature (partly, but not entirely, English literature) There are many, however, who realise that "know thyself" (and know human nature, with the deepest possible insight and sympathy) is still the paramount aim of education, and that of this—and much else—literature is the best teacher, besides its value as giving the most worthy sort of delight The plan, however, must be that of fairly wide reading, within the student's range, and must aim at enjoyment and intelligent appreciation, not annotation or summarising or the parrot use of critical terms There is no student who cannot profit greatly by such a study, rightly directed Much depends on the plan, but more on the teacher, who must be chosen for his intelligence, not for distinction secured by the cramming of jargon

(b) [illegible]

tizen than, The [illegible] position of leadership [illegible] future will occupy a but all in an important sense) in the critical years of reconstruction They will have to meet, and should be able to help in solving, the various problems, and it is their extremely responsible duty to gain and to disseminate accurate information regarding these and give guidance to the general thought Those who become teachers, in particular will have a great responsibility to their pupils in these matters The problems can be classified as political, economic, industrial social, and so on, but all are interrelated,

and our idea must be to start from the actual problems, consider them in all aspects, and help to solve them in the light of past experience and of the principles derived from this There will always be need for the theoretic specialist in each sphere, but there is very great need now for a body of citizens who have a proper understanding of the issues and can set an example of restraint and impartiality This is the most important function of the graduate in the near future, and if he is to perform it well he must spend a good deal of his time at college on a systematic course that might be called 'Present day Problems" It would be a most educative course, full of human interest and requiring the application of strict scientific method and those who passed through it could not easily be deluded by catch words and loose and sentimental arguments It might also, in social service have its practical side Discussion would play an important part, and in these matters even more than in others students must be encouraged to think for themselves For this course it will be necessary to find university teachers with sufficient comprehensiveness of knowledge and understanding And not only in this but in all departments of university study it must be remembered that the qualities required for first rate research and for first rate teaching are not the same, though research within his capacity always helps the teacher

(e) Every Jaipur student should be well up in the history of Rajputana and should find inspiration in this Further, the artistic gifts that are characteristic of the region should be given opportunity of development, not merely in college societies but also by means of the curriculum, in which the study of Indian art architecture, and craftsmanship, with a special Jaipur reference, should occupy an important place

(f) The arts students should not be allowed to leave the University in ignorance, as is now usual of even the simplest facts and principles of science Every day science should be a compulsory subject in schools Its immense importance in preparation for life is emphasised by its inclusion as a compulsory subject in the I C S Examination and in the university it is desirable that every student should obtain some idea of scientific method and also of the significance

of recent scientific discovery and thought ...
an elaborate or tech-...
an intelligent ...
tance with th... ... no educated man should be without this At present even students of science are frequently without it, being concerned only with the facts of their science and not its own wider relationships and meaning

On these studies essential to all a considerable amount ... time will be spent. A good deal of it may be in the preli-... nary year but much will remain for the greater maturity ... the degree course Even the pass graduate, however, must have also a thorough training in a group of optional sub-... jects and this will be made possible despite the claims of the common subjects we have mentioned by the continuity of the three years course, so that the curriculum while immensely more educative than that now prevalent, will be at least as strong in optional subjects as that of other universities, not to speak of the high standard of instruction and examining which ... be insisted upon

We do not wish to go into details regarding optionals, but ... est that an attempt should be made (a) to relate every ... to daily experience and (b) to accompany the study of ... particular subject with such subsidiary studies as are neces-... for the genuine understanding of it It is suggested also that in all study of Indian history special attention should be paid to the cultural traditions of the Indian peoples, and to such unity as may be found among them so that mutual understanding and appreciation may be cultivated Thus the university will be playing its part in the development of what may be called an *Indian* culture

So far as possible there should be a system of tutorial guidance for students and there should be a regular system of discussion-classes requiring the contribution of each student and the exercise of his own thought Besides such classes for particular subjects there should be other equally systematic discussion-classes for a wider survey And the whole system of learning and supervision should be such as to make every

and our idea must be to start from the actual problems, consider them in all aspects, and help to solve them in the light of past experience and of the principles derived from this There will always be need for the theoretic specialist in each sphere, but there is very great need now for a body of citizens who have a proper understanding of the issues and can set an example of restraint and impartiality This is the most important function of the graduate in the near future, and if he is to perform it well he must spend a good deal of his time at college on a systematic course that might be called 'Present day Problems" It would be a most educative course, full of human interest and requiring the application of strict scientific method, and those who passed through it could not easily be deluded by catch-words and loose and sentimental arguments It might also, in social service, have its practical side Discussion would play an important part, and in these matters even more than in others students must be encouraged to think for themselves For this course it will be necessary to find university teachers with sufficient comprehensiveness of knowledge and understanding And not only in this but in all departments of university study it must be remembered that the qualities required for first rate research and for first rate teaching are not the same, though research within his capacity always helps the teacher

(c) Every Jaipur student should be well up in the history of Rajputana, and should find inspiration in this Further, the artistic gifts that are characteristic of the region should be given opportunity of development, not merely in college societies but also by means of the curriculum, in which the study of Indian art, architecture, and craftsmanship, with a special Jaipur reference, should occupy an important place

(d) The arts students should not be allowed to leave the University in ignorance as is now usual, of even the simplest facts and principles of science Every-day science should be a compulsory subject in *schools* Its immense importance in preparation for life is emphasised by its inclusion as a compulsory subject in the I C S Examination and in the *university* it is desirable that every student should obtain some idea of scientific method and also of the significance

of recent scientific discovery and thought. Without an elaborate or technical course it is possible to obtain an intelligent and, so far as it goes, accurate, acquaintance with these matters, and no educated man should be without this. At present even students of science are frequently without it, being concerned only with the facts of their science and not its own wider relationships and meaning.

On these studies essential to all, a considerable amount of time will be spent. A good deal of it may be in the preliminary year, but much will remain for the greater maturity of the degree course. Even the pass graduate, however, must have also a thorough training in a group of optional subjects and this will be made possible, despite the claims of the common subjects we have mentioned, by the continuity of the three years course so that the curriculum, while immensely more educative than that now prevalent, will be at least as strong in optional subjects as that of other universities, not to speak of the high standard of instruction and examining which must be insisted upon.

We do not wish to go into details regarding optionals, but suggest that an attempt should be made (*a*) to relate every study to daily experience and (*b*) to accompany the study of a particular subject with such subsidiary studies as are necessary for the genuine understanding of it. It is suggested also that in all study of Indian history special attention should be paid to the cultural traditions of the Indian peoples, and to such unity as may be found among them, so that mutual understanding and appreciation may be cultivated. Thus the university will be playing its part in the development of what may be called an *Indian* culture.

So far as possible there should be a system of tutorial guidance for students and there should be a regular system of discussion classes requiring the contribution of each student and the exercise of his own thought. Besides such classes for particular subjects there should be other equally systematic [illegible] classes for a wider survey. And the whole system of teaching and supervision should be such as to make every

student, in however limited a sense, a research worker, making and testing discoveries of his own

In the case of honours and post graduate degrees the written examinations (or the production of a thesis, where this is provided for) should be supplemented by a viva voce examination, to which considerable importance should be attached

(5) A University for Jaipur

We think it desirable that a new university should be established for the State of Jaipur, with its headquarters and administration in this city The present affiliation to Agra University and (in respect of the Intermediate Examination) to the Rajputana and Ajmer Board is in many ways unsatisfactory, and it is only by constructing a university of our own that the ideas mentioned above can be carried out There will be constituent colleges, under the direct administration of the university, in Jaipur city but there will also be recognized colleges, under the supervision but not the management of the university, at Pilani and perhaps elsewhere in the State, and moreover there are advantages in admitting to affiliation colleges in other states of Rajputana which may wish to join

The professional colleges will meet a need not merely local, and we may expect them always to have more applicants than places It is likely that this will happen in the case of non professional courses also, since the new principles on which they will be designed are bound to appeal to people in other parts of India

There are two principles which we hope will be observed scrupulously by the University of Jaipur One is an exceptionally high standard of instruction and of examining to be secured partly by the appointment of distinguished men as university professors and the appointment even to minor teaching posts of none but men of first rate ability The other is the complete disregard, in every aspect of the university's activity, of all considerations except efficiency

## (6) Female Education,

We suggest that at every stage separate *educational* institutions for girls should be provided Without the confidence thus given to parents and guardians there can be no rapid extension of female education in the State In schools and colleges of their own girls can be free from embarrassment, and can enjoy all the benefits of college life and activity It is desirable that they should be taught by women teachers and should be under *their control* *But in the university, while* a women's college, residential in type, is essential, it will not be possible to eliminate lecturing by men, particularly in the most advanced studies Women students cannot be excluded from the lecturing and guidance of distinguished members of the university staff nor will it be possible to provide in the women's college for the complete range of university subjects It will be necessary, *in some cases*, for men to lecture in the women's college, or for *some* women students to attend the men's college for certain lectures or for laboratory work, or both these arrangements *may* be necessary The girls' high schools should, of course be staffed entirely by women

## (7) Research

Research and original work are of course a most important element in higher *education* And expert research is of such value to the *state that* its careful organization is necessary *We feel that for* some time to come—*in* view of the urgent *necessity of* accelerating the economic *development* of the *country—special attention should* be given to research of practical significance *This* includes *not only* research in the natural sciences but *also the* expert *analysis of facts* relating to the *economic and social* life

We suggest that research *should* be planned with a view to coordination of work in various branches If, for example, the development of small *industries is under* consideration, an economist would be asked to investigate the economic problems a statistician would undertake a census of those industries , and persons competent in *technological* research would investigate

student, in however limited a sense a research worker, making and testing discoveries of his own

In the case of honours and post graduate degrees the written examinations (or the production of a thesis where this is provided for) should be supplemented by a viva voce examination, to which considerable importance should be attached

(5) A University for Jaipur

We think it desirable that a new university should be established for the State of Jaipur with its headquarters and administration in this city The present affiliation to Agra University and (in respect of the Intermediate Examination) to the Rajputana and Ajmer Board is in many ways unsatisfactory and it is only by constructing a university of our own that the ideas mentioned above can be carried out There will be constituent colleges under the direct administration of the university, in Jaipur city but there will also be recognized colleges under the supervision but not the management of the university, at Pilani and perhaps elsewhere in the State and moreover there are advantages in admitting to affiliation colleges in other states of Rajputana which may wish to join

The professional colleges will meet a need not merely local, and we may expect them always to have more applicants than places It is likely that this will happen in the case of non professional courses also, since the new principles on which they will be designed are bound to appeal to people in other parts of India

There are two principles which we hope will be observed scrupulously by the University of Jaipur One is an exceptionally high standard of instruction and of examining to be secured partly by the appointment of distinguished men as university professors and the appointment even to minor teaching posts of none but men of first rate ability The other is the complete disregard in every aspect of the university's activity, of all considerations except efficiency

7 The Imperial Veterinary Research Institute
8 The Institute of Animal Husbandry and Dairying, Bangalore
9 The Nutrition Research Institute
10 The Mining Institute, Dhanbad
11 The Department of Mining Benares *Hindu University*
12 The Geological Survey of India
13 The India Meteorological Department
14 The Statistical Institute, Calcutta
15 The Bombay University School of Economics
16 The Sydenham College of Commerce, Bombay
17 The Sir Dorabji Tata Graduate School of Social Work, Bombay

Such assistance should never be given except to men of distinction who will be able, *in return*, to render special service to the State

Business men and industrialists should realise the immense value to them of such organized research, and should contribute towards the financing of it It may be desirable to institutute a Rearch Fund the interest on which would be made available for financing research

In addition to such planned research, there should be ample encouragement and aid for approved independent research Despite the predominant need at present for scientific research humanistic research must not be allowed to lapse But both now and always it must be of a significant and fruitful kind Much time has been wasted, for example in the sphere of history, philosophy and language on research that has no sort of value

8 Technical Education

The organization of technical education in a region must be with reference to the needs of local industries and crafts In Jaipur there are a large number of small industries requiring development and modernization In view of the paucity of sources of power it is not likely that Jaipur will become an important centre of large scale industries A Polytechnic on the lines of the Delhi Polytechnic and adapted in its courses of

the possibility of improving their technique Similarly, in an endeavour to raise the nutritional standards of the people a medical research worker would be asked to prepare charts of balanced diet for different classes of people, an economist would work out on that basis the quotas of food materials that must be produced or imported to make available the contemplated elements of diet, and a student of agricultural science would study the problem of production These are only illustrations There will be many opportunities for such co ordination of research, so as to bring into simultaneous consideration the various aspects of each problem

This kind of co ordination implies co-ordination of another sort—the bringing together of the problems of the various departments of Government, and also wherever possible, those of private industry In particular, the heads of the Departments of Industries and Commerce, Agriculture, Forests Transport, Finance, Public Health and Co operation will have to meet and consider which of their problems require mutual assistance among departments Consideration may be given to the idea of constituting a Scientific Research Organization Committee consisting of the heads of these departments representatives of industry and agriculture, and representatives of the university or college It will be the work of this committee to co ordinate research work and also to recommend the distribution of funds

Brilliant students might be given scholarships for advanced research in specialized institutions in India and abroad Among *such institutions in this country are the following* —

1 The Laboratory of the Department of Industries and Scientific Research Old Delhi
2 The Indian Institute of Science, Bangalore
3 The Department of Chemical Technology, Bombay University
4 The Indian Association for the Cultivation of Science Calcutta
5 The Imperial Agricultural Research Institute, New Delhi
6 The Forest Research Institute

7 The Imperial Veterinary Research Institute
8 The Institute of Animal Husbandry and Dairying, Bangalore
9 The Nutrition Research Institute
10 The Mining Institute, Dhanbad
11 The Department of Mining Benares Hindu University
12 The Geological Survey of India
13 The India Meteorological Department
14 The Statistical Institute, Calcutta
15 The Bombay University School of Economics
16 The Sydenham College of Commerce Bombay
17 The Sir Dorabji Tata Graduate School of Social Work Bombay

Such assistance should never be given except to men of distinction who will be able, in return to render special service to the State

Business men and industrialists should realise the immense value to them of such organized research and should contribute towards the financing of it It may be desirable to institutute a Research Fund the interest on which would be made available for financing research

In addition to such planned research, there should be ample encouragement and aid for approved independent research Despite the predominant need at present for scientific research humanistic research must not be allowed to lapse But both now and always it must be of a significant and fruitful kind Much time has been wasted, for example in the sphere of history philosophy and language on research that has no worth of value

8 Technical Education.

The organization of technical education in a region must be with reference to the needs of local industries and crafts In Jaipur there are a large number of small industries requiring development and modernization In view of the paucity of sources of power it is not likely that Jaipur will become an important centre of large scale industries A Polytechnic on the lines of the Delhi Polytechnic and adapted in its courses of

the possibility of improving their technique Similarly, in an endeavour to raise the nutritional standards of the people, a medical research worker would be asked to prepare charts of balanced diet for different classes of people, an economist would work out on that basis the quotas of food materials that must be produced or imported to make available the contemplated elements of diet, and a student of agricultural science would study the problem of production These are only illustrations There will be many opportunities for such co-ordination of research, so as to bring into simultaneous consideration the various aspects of each problem

This kind of co-ordination implies co-ordination of another sort—the bringing together of the problems of the various departments of Government, and also wherever possible, those of private industry In particular, the heads of the Departments of Industries and Commerce, Agriculture, Forests, Transport Finance, Public Health and Co-operation will have to meet and consider which of their problems require mutual assistance among departments Consideration may be given to the idea of constituting a Scientific Research Organization Committee consisting of the heads of these departments representatives of industry and agriculture, and representatives of the university or college It will be the work of this committee to co ordinate research work and also to recommend the distribution of funds

Brilliant students might be given scholarships for advanced research in specialized institutions in India and abroad Among such institutions in this country are the following —

1 The Laboratory of the Department of Industries and Scientific Research Old Delhi.
2 The Indian Institute of Science, Bangalore
3 The Department of Chemical Technology, Bombay University
4 The Indian Association for the Cultivation of Science, Calcutta
5 The Imperial Agricultural Research Institute, New Delhi
6 The Forest Research Institute

7 The Imperial Veterinary Research Institute
8 The Institute of Animal Husbandry and Dairying, Bangalore.
9 The Nutrition Research Institute
10 The Mining Institute, Dhanbad
11 The Department of Mining Benares Hindu University
12 The Geological Survey of India
13 The India Meteorological Department
14 The Statistical Institute Calcutta
15 The Bombay University School of Economics
16 The Sydenham College of Commerce, Bombay
17 The Sir Dorabji Tata Graduate School of Social Work, Bombay

Such assistance should never be given except to men of distinction who will be able, in return, to render special service to the State

Business men and industrialists should realise the immense value to them of such organized research, and should contribute towards the financing of it It may be desirable to institutute a Research Fund the interest on which would be made available for financing research

In addition to such planned research, there should be ample encouragement and aid for approved independent research Despite the predominant need at present for scientific research humanistic research must not be allowed to lapse But both now and always it must be of a significant and fruitful kind Much time has been wasted, for example in the sphere of history, philosophy and language on research that has no sort of value

8 Technical Education

The organization of technical education in a region must be with reference to the needs of local industries and crafts In Jaipur there are a large number of small industries requiring development and modernization In view of the paucity of means of power it is not likely that Jaipur will become an important centre of large scale industries A Polytechnic on the lines of the Delhi Polytechnic and adapted in its courses of

instruction to local needs would revive and develop our languishing industries. It would impart instruction in improved methods of production to the artisans and their children It should have an expert staff, trained in technology of various kinds and able to direct the different branches of work and develop the knowledge and skill that already exist They will study, in particular, ways in which the talent available may be adapted to produce new and attractive articles for the market The Polytechnic will help the artisan to improve and modernize his tools, to understand the use of small machines, to work with a clear understanding of the technique of production, and to make the most of his artistic gifts

(9) Libraries

There should be town libraries, village libraries, and circulating or travelling libraries to supplement village libraries and to provide for villages which are without these

Every sort of library should be supported largely, but not entirely, by State grants The borrowing of a single book at a time should be free, but there should be a small fee for borrowing beyond this When there can be no stationary library there should at least be a reading room and this is likely to develop eventually into a library

Each library may be managed by a committee, usually headed by non officials The librarian may be a full-time employee in the larger towns and part time in smaller towns and in villages He will maintain the accounts and conduct correspondence, besides managing the library In towns, books may be selected by the library committee, subject to the approval of the library department and for village and travelling libraries books may be selected by the department

All purchases, whether of books or of other articles which can thus be more economically and satisfactorily obtained, may be made through the Libraries' Co operative Society in which every library committee will deposit the whole of its funds

The tendency to spend too large a proportion of funds upon periodicals should be avoided There should be special

consideration of the needs of those who leave school early, and those who through the adult literacy work have become literate, since without such care these are likely to lapse into illiteracy It should be remembered, in choosing both books and periodicals, that interest and amusement are quite as important as instruction.

In the larger towns at least, no-one should be appointed librarian unless he possesses a good certificate in librarianship, and as many as possible of the librarians in the small libraries should have an adequate training The classification of books should always be as simple as possible an elaborate decimal system being only a nuisance except in really large libraries

Frequently some well to-do and generous person will give a building for the village library, which will be associated with his name or another name bestowed on it by him

In Baroda there are ladies' libraries, which are also attractive social and educative centres for women's life "Not only are books and periodicals supplied, but classes are held for teaching women various arts and crafts such as knitting, embroidery, sewing music, painting The library is in all ways made an attractive place to go to" This very successful idea might be tried here also There may be children's, libraries too, attached either to ladies' libraries or to general libraries

In most of the above recommendations we are greatly indebted to the Baroda system

10 Scouting

In scouting a great deal of useful work has been done in the State but the movement has never caught the imagination of the people Its development and willing adoption by the public is of unique importance since its functions are (1) training of character and cultivation of the habit of helpfulness without self-congratulation, (2) training in quickness and [illegible] both physical and mental, (3) complete forgetfulness of communal and other differences, (4) bodily health, and [illegible] in congenial activity, and (5) direct public service of every kind The movement is ruined as soon as any hint of

compulsion enters, in respect either of teachers or of boys Scouting must never be part of a school curriculum, its activities must never be assigned periods in the school time table, nor must *hiking competitions, rallies games, etc*, be regarded as scouting except when related to regular scout training

Suggestions —(1) Scout training and enthusiasm should be regarded as an addition to a man s qualifications (2) It is a duty of headmasters to give continual encouragement to scouting to select with the greatest care those teachers who will be scout masters or scouters, to be in constant touch with their work, and to obtain due recognition for it (3) Open groups in towns should be encouraged, and scouting should be made possible for the poorest people (4) An attempt should be made to get scouting introduced in every village (5) The greatest possible practical use should be made of scouts both on official occasions and at other times The kinds of work which they can do well, and which are exceedingly good for them, are many—for example, acting as guides, helping in crowd or traffic, ambulance work, spreading accurate information teaching (by rovers) for instance of hygiene and literacy, and relieving poverty If such activities are encouraged the movement will make a much greater appeal to the public than at present

J C Rollo (*Convener*)
Sardar Singh
Narendra Singh
G Seshagiri Rao
Santokh Singh
G Dessau
M A A Kherie
E da Costa
B G Bhattacharya
P N Kathju
K C Patni
A R Normand
S D Pande
B H Zaidi
P. S Narayan Prasad (*Secretary*)

## APPENDIX A

### The Economic Background in Jaipur State.

*Size and conformation of the State*

The State of Jaipur is one of the most important of the Rajputana States, being third in size and first in population It has an area of 15,601 sq miles, with a population of 30,40,876 persons according to the census of 1941 The territory of the State falls into two main divisions, separated by a range of the Arawali hills cutting across the State. The soil is generally sandy in the north and west, but in the southern area it is rich and black and better suited to profitable agriculture.

*Rivers.*

2 There are three principal rivers in the State—the Banas, the Chambal and the Banganga—besides a number of small streams which are dry except during the rainy season The Banas is a tributary of the Chambal, which flows on the southern border of the State through the districts of Malpura and Sawai Madhopur The Banganga flows in the eastern part of the State and joins the river Jumna. The State has an important salt lake at Sambhar on the border between Jaipur and Jodhpur

*Climate and Rainfall.*

3 The climate is dry, and is subject to extremes of cold and heat The average rainfall is 21 87 inches but it varies considerably in different areas of the State and in different years In 1933 it was 10 48 inches, while in 1924 it was 35·03 inches Similarly in one year it was recorded that Sawai Madhopur had a rainfall of 64 76 inches, while in places like Mozamabad, Shekhawati and Kandar it was as low as 9 inches

*Towns and Villages.*

4 In the State there are 28½ towns, the half town being the city of Sambhar, which is administered conjointly with Jodhpur State There are 5,925 villages Of the towns 32 have a population of over 5,000, and there has been a clear increase in the urban population during the last decade, the greatest increase being recorded in the populations of Jaipur city and Sikar

*Literacy.*

5 The degree of literacy is extremely low Of the total population of nearly 33½ lakhs, 1,62,246 persons are reckoned as literate, a percentage of 5·3 for the State For the male population the literacy figure stands at 9·4 %, while that of females is ·83 % There are 1,034 educational institutions, which include primary schools, secondary schools and colleges.

compulsion enters, in respect either of teachers or of boys Scouting must never be part of a school curriculum, its activities must never be assigned periods in the school time table, nor must hiking, competitions, rallies, games, etc, be regarded as scouting except when related to regular scout training

Suggestions —(1) Scout training and enthusiasm should be regarded as an addition to a man's qualifications (2) It is a duty of headmasters to give continual encouragement to scouting to select with the greatest care those teachers who will be scout-masters or scouters, to be in constant touch with their work and to obtain due recognition for it (3) Open groups in towns should be encouraged, and scouting should be made possible for the poorest people (4) An attempt should be made to get scouting introduced in every village (5) The greatest possible practical use should be made of scouts, both on official occasions and at other times The kinds of work which they can do well, and which are exceedingly good for them, are many—for example, acting as guides, helping in crowd or traffic, ambulance work, spreading accurate information teaching (by rovers), for instance of hygiene and literacy, and relieving poverty If such activities are encouraged the movement will make a much greater appeal to the public than at present

J C Rollo (*Convener*)
Sardar Singh
Narendra Singh.
G Seshagiri Rao
Santokh Singh
G Dessau
M A A Kherie
E da Costa
B G Bhattacharya
P N Kathju
K C Patni
A R Normand
S D Pande
B H Zaidi
P S Narayan Prasad (*Secretary*)

# APPENDIX A.

## The Economic Background in Jaipur State.

*Size and conformation of the State*

The State of Jaipur is one of the most important of the Rajputana States, being third in size and first in population It has an area of 15,601 sq miles, with a population of 30,40,876 persons according to *the census of 1941* The territory of the State falls into two main divisions, separated by a range of the Arawali hills cutting across the State. *The soil is generally* sandy in the north and west, but in the southern area it is rich and black and better *suited to profitable agriculture*

*Rivers.*

2 There are three principal *rivers in the State*—the Banas, the Chambal and the Banganga—besides a number of small streams which are dry except during the rainy season The Banas is a tributary of the Chambal, which flows on the southern border of the State through the districts of Malpura and Sawai Madhopur The *Banganga* flows in the eastern part of the State and joins the river Jumna The State has an important salt lake at Sambhar on the border between Jaipur and Jodhpur

*Climate and Rainfall.*

3 The climate is dry, and is subject to extremes of cold and heat. The average rainfall is 21 87 inches , but it varies considerably in different areas of the State and in different years In 1939 it was 10 48 inches, while in 1924 it was 39 03 inches Similarly in one year it was recorded that Sawai Madhopur had a rainfall of 64 76 inches, while in places like Mozamabad, Shekhawati and Kandar it was as low as 9 inches

*Towns and Villages.*

4 In the State *there are* 38½ towns, the half town being the city of Sambhar, which is administered *conjointly* with Jodhpur State There are 5,938 *villages* Of the towns 32 have a population of over 5,000, and there has been a clear increase in the urban population during the last decade, the *greatest increase* being recorded in the populations of Jaipur city and Sikar

*Literacy.*

5 The degree of literacy is extremely low Of the total population of nearly 30½ lakhs, 1,62,246 persons are reckoned as literate, a percentage of 5 3 for the State For the male population the literacy figure stands at 9 4 %, while that of females is 85 % There are 1,094 educational institutions, which include primary schools, secondary schools and colleges.

compulsion enters, in respect either of teachers or of boys Scouting must never be part of a school curriculum its activities must never be assigned periods in the school time table, nor must hiking competitions rallies games etc be regarded as scouting except when related to regular scout training

Suggestions —(1) Scout training and enthusiasm should be regarded as an addition to a man s qualifications (2) It is a duty of headmasters to give continual encouragement to scouting to select with the greatest care those teachers who will be scout masters or scouters to be in constant touch with their work and to obtain due recognition for it (3) Open groups in towns should be encouraged and scouting should be made possible for the poorest people (4) An attempt should be made to get scouting introduced in every village (5) The greatest possible practical use should be made of scouts both on official occasions and at other times The kinds of work which they can do well and which are exceedingly good for them are many—for example acting as guides helping in crowd or traffic ambulance work spreading accurate information teaching (by rovers) for instance of hygiene and literacy and relieving poverty If such activities are encouraged the movement will make a much greater appeal to the public than at present

J C Rollo (*Convener*)
Sardar Singh
Narendra Singh
G Seshagiri Rao
Santokh Singh
G Dessau
M A A Kherie
E da Costa
B G Bhattacharya
P N Kathju
K C Patni
A R Normand
S D Pande
B H Zaidi
P S Narayan Prasad (*Secretary*)

crops sown or the total yield of the large *Non-Khalsa* area is available Harvest inspections are carried out in only 2,919 villages (*Khalsa*, partly *Khalsa*, and Sikar, Khetri and Uniara), comprising an area of 69,07,945 bighas or 43 1 % of the entire area of the State No land record staff is maintained in 3,400 villages, comprising an area of 90,60,311 bighas, or 56 9 % of the total area of the State

Some of the *Non-Khalsa* villages have not even been surveyed

With the exception of the Sikar, Khetri and Uniara *Thikanas*, the *Panchpana Thikanas* of Sheikhawati where settlement has recently been introduced, and certain other big *Thikanas*, cash assessment has not been introduced by the State-grantees

Even in the case of the *Khalsa* area, there are at present two whole tehsils (Mozamabad and Malpura) in the Western Revenue Division and several large villages in the Eastern Revenue Division in which cash rents have not been introduced

Then again with the exception of the *batai* crops in the grain rented *Khalsa* villages for which figures can be extracted from the village records, there is no record of the total yield from the area under cultivation

With the exception of Nizamat Kotkasim, where the *biswadari* system prevails the tenants in the *Khalsa* villages do not at present possess occupancy rights

10 Out of the total area of *Khalsa* villages 46,70,568 bighas, the area under cultivation during St 1997 (the last complete year for which figures are available at the moment) was 17,25,252 bighas, classified as below — Area under Cultivation

| | |
|---|---|
| *Irrigated* | 3,40,008 bighas |
| *Unirrigated* | 13,85,244 bighas. |

The culturable uncultivated area, excluding the new fallow under occupation, totalled 13,98 581 bighas, or 29 8% of the total area and 81% of the cultivated area

11 There are in all 992 irrigation tanks, classified thus — Tanks and Wells.

| | |
|---|---|
| State-owned | 250 |
| *Private* | 742 |

Population — 6 The population of the State has been increasing, according to census figures The increase was 12 5 % in the 1931 census and 15 5 % in that of 1941 The density of population for the State as a whole stands at 194 92 per sq mile Besides natural increase of population *there is a certain amount of immigration into the State It is recorded* in the census of 1941 that 97,846 persons have moved into the State from outside, of whom 22,995 are males and 74,851 females Over 95% of the immigrants are from the adjoining states of Rajputana and Ajmer Merwara, and the cause of immigration is social rather than economic

Occupations — 7 *According to the Census Report of 1941 the number of people* who are classified as earners shows a decline and the number of dependants a corresponding increase Earners have decreased by 17 per thousand, and dependants and non workers have increased by the same proportion The main occupation of the people is agriculture and the production of raw materials, and this accounts for about 66 % of the population Preparation and supply of material substances gives employment to 21% of the people, while the rest are engaged in public administration, the liberal arts and other work of various kinds

Industry — 8 Among industries, which are mostly of the small scale cottage type, the most important are textiles, hides and skins, industries relating to dress and toilet, the building industry and wood manufacture There are few large scale industries

Agriculture and Land Revenue — 9 With regard to agriculture *the following facts may be of interest* *

The area of Jaipur State is 15,601 sq miles, of which over 70 % *is Non-Khalsa (i e not directly State-administered) and is held by a large* number of land holders, ranging from small Udkies holding one or two bighas of land, received through charity to large estate holders like the Rajas of Sikar and Khetri To put it in another way, out of a total of 6,416 towns and villages only 2,164 are *Khalsa* and the rest *Non-Khalsa*

In the *Non Khalsa* area the State-grantees exercise practically unrestricted powers so far as cultivation and products are concerned They are at liberty to let their lands, lie fallow, or to have them *cultivated in* whatever manner they please

Further, with the exception of the three jurisdictional *Thikanas* of Sikar, Khetri and Uniara, no information regarding the acreage, the

*Paragraph 9 is based on a note prepared by Khan Sahib A A Kherie for the use of the Agriculture Sub-committee

# APPENDIX B.

The training in Jaipur State of soldiers who will act as Army Instructors in civil matters during the period between the Armistice and Demobilization —

The Directorate of Welfare and Amenities at General Headquarters has in view a scheme by which the time of soldiers may be usefully employed, between the armistice and demobilization, in more concentrated educational courses than are possible to them in wartime Certain courses will be common to all—for example, health, sanitation, nutrition, and first aid, and instruction in these can be given by the military officers of the various technical corps There may be, however, very many other courses suited to different personal and regional needs It has been suggested that provinces and states might train instructors in courses for which they have facilities and which bear relation to their own plans for post war development The trained instructors would then proceed to various military training centres, and train others specially selected from various units, who would then act as instructors to men in their own units This scheme would begin its operation immediately after the armistice All its details in respect of Jaipur would have to be completely arranged for immediately, so that we may be ready however soon the armistice may come

Of the large list of subjects from which cho ce may usefully be made, we should select a small number particularly related to the State's resources and its post war plans, and spare no trouble or expense to secure efficiency Thus the ends of development as well as of the training of the soldiers will be served—for the training centres may remain permanently, and the instructors trained will be of permanent use

*The courses in which Jaipur State might provide training immediately after the armistice are the following —*

1 *Vegetable growing—At Bast ?*

2 Dairying—At Pilani ?

3 Sheep-farming—At Pilani ?

4. *Principles and Practice of Co-operation, including several types of Co-operative Societies—in the Maharaja's College, Jaipur*

5 *Organizing of games, clubs, boy scouts, dramas, etc —Jaipur, Boy Scout Headquarters*

The total number of *Khalsa* wells is 52,409 as shown below

| | In use | Out of use | Total |
|---|---|---|---|
| *Pucca* | 21,905 | 11,998 | 33,903 |
| *Kham* | 13,261 | 5,245 | 18,506 |
| Total | 35,166 | 17,243 | 52,409 |

In other words nearly 33% of the *Khalsa* wells are out of use Of these nearly 12,000 are *pucca* The figures for the *Non Khalsa* villages are not available

Principal Crops

12 The principal food and fodder crops grown in the State are maize, *bajra*, *jowar*, barley, wheat, gram, *gawar*, carrots, lucerne and *char - awar*. The total *Khalsa* area under each of these crops during St 1997 was —

| | | |
|---|---|---|
| Maize | 74,259 | bighas |
| *Bajra* | 5,57,568 | „ |
| *Jowar* | 2,69 757 | „ |
| Barley | 1,96,772 | „ |
| Wheat | 1,12,841 | „ |
| Gram | 1 04,321 | „ |
| *Gawar* | 45 871 | „ |
| Carrots | 9 712 | „ |
| Lucerne | 292 | „ |
| *Charri* | not known | |
| *Jowra* | 12 448 | „ |

Ploughs and Plough cattle

There are 1,38 754 ploughs in the *Khalsa* area of the State Figures for the *Non Khalsa* villages are not available

There are 4,75,822 plough cattle in the State

Communications

13 The total length of roads, metalled and unmetalled, maintained by the State is 878 57 miles The recurring expenditure for the upkeep and maintenance of the roads is about Rs 4 5 lakhs per annum The State also owns and operates a railway the total length of which is 254 miles. The State's total capital outlay on railways up to the end of March, 1942, is 1 49 crores The gross earnings of the railway in 1942 43 were 25 83 lakhs.

# APPENDIX C

## STATEMENT SHOWING *KHALSA* AREA OUT OF HOLDING* IN JAIPUR STATE

According to the Area Statement for the Season 1942—43 (*Sambat* 1999)

*Bighas*

| Name of Tehsil | Details of *Khalsa* area out of holding | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | Culturable | | | | Unculturable | | | | |
| | New fallow | Old fallow and culturable waste | Groves | Total | Fit for grazing | Not fit for grazing | Total | Grand Total | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 10 |
| Sawai Jaipur | 275 | 14,700 | 19 | 14 994 | 8,087 | 10 544 | 18 631 | 33,625 | According to St 1998 |
| Chaksu* .. | 195 | 817 | 5 | 1,017 | 18 737 | 8 109 | 26 846 | 27,863 | Do |
| Amber* | 488 | 10,698 | 19 | 11 205 | 7,631 | 8 664 | 16 295 | 27,500 | |
| Jamwa Ramgarh | 868 | 19,482 | 1 | 20 351 | 29 203 | 18 830 | 48 033 | 68 384 | Do |
| Torawati* | 1,148 | 10 350 | 5 | 11 503 | 25,553 | 8 418 | 33,971 | 45,474 | |
| Bairath . | 636 | 2,108 | .. | 2,744 | 33,141 | 16 455 | 49,596 | 52,340 | |
| Sambhar | 464 | 429 | 4 | 837 | 2,532 | 4 938 | 7,469 | 8,305 | |

*Vide ft note on p 9

In this list places have been suggested for the following reasons

1 At the Government experimental farm at Bassi there is already a section devoted to vegetable growing

2 At Pilani there is a flourishing dairy farm, supervised by an expert of the Imperial Council of Agricultural Research, who has provided a note on dairy-farming attached to the report of this Committee His supervision of the proposed training would be valuable

3 There is already a sheep farm at Pilani

4 There is an expert Commerce staff in the Maharaja's College, and classes in co operation could be excellently conducted

5 It would be good to have in Jaipur city the training in the organizing of games, scouting, etc , because apart from its direct usefulness *it would give a great impetus to the scout movement in the city*

As regards detailed arrangements, cost, number of trainees, and length of course, information can be obtained only from experts in each branch, and the scheme will be governed also by the extent of financial support available

*It is assumed that (a) if such training centres are established in this State they will be open to other soldier-trainees as well as to those from this State (b) that similarly Jaipur soldiers will be admitted to training* courses elsewhere in subjects which cannot be provided for here The following subjects are specially suited to Jaipur soldiers in view of proposed developments in the State—in addition of course to subjects uniformly suitable

1 The agricultural subjects

2 Fruit and vegetable *canning* and *bottling pickles, chutneys,* squashes, etc

3 Poultry keeping

4 Bee-keeping

5 Silkworm rearing

6 Lac production

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Malarna Doongar . | 1,219 | 35,494 | 5 | 36,718 | 16,836 | 16,69\ | 35,471 | 72,189 | |
| Gangapur . | 86 | 1,597 | 2 | 1,685 | 4,788 | 7,264 | 12,032 | 13,787 | |
| Wazirpur ... | 33 | 519 | 18 | 570 | 2,436 | 4,336 | 6,772 | 7,842 | |
| Bamanwas ... | 2,027 | 8,058 | . | 10,085 | 18,079 | 6,389 | 24,468 | 34,555 | |
| Nadoti ... | 47 | 4,084 | 19 | 4,150 | 9,180 | 3,277 | 12,457 | 16,607 | |
| Hindaun ... | 422 | 3,195 | 2 | 3,619 | 33,525 | 6,334 | 39,859 | 43,478 | |
| Ghonala ... | 18 | 43 | .. | 61 | 3 590 | 5,557 | 9,147 | 9,208 | |
| Toda Bhim ... | 29 | 25 | ... | 54 | 4,525 | 4,853 | 9,378 | 9,432 | |
| Mahwa ... | 88 | 2,517 | 7 | 2,612 | 4,208 | 5,560 | 9,768 | 12,380 | |
| Kot Kasim ... | 2,536 | 6,774 | ... | 9,310 | 1,897 | 2,793 | 4,690 | 14,000 | |
| | 21,056 | 3,85,664 | 260 | 4,07,420 | 4,95,694 | 2,63,552 | 7,59,246 | 11,66,766* | *Net area in bighas available for extension of cultivation. |

Ex. Note.—Out of holding—Land which is not in the occupation of any one and for which no *Chalbandi parchas* have been issued.

Old Fallow—Land which has not been cultivated for over three years

New Fallow—Land not cultivated for three years or less.

(Figures supplied by Khan Sahib A. A Khera)

# APPENDIX C—(continued).

| Name of Tehsil | Details of *Khalsa* area, out of holding | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | Culturable | | | | Unculturable | | | | |
| | New fallow | Old fallow and culturable waste | Groves | Total | Fit for grazing | Not fit for grazing | Total | Grand Total. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Danta Ramgarh | 36 | 808 | | 344 | 1,435 | 3,888 | 5,323 | 5,667 | |
| Moazzamabad | 1,452 | 27,385 | 6 | 28,843 | 7,794 | 11,862 | 19,656 | 48,499 | |
| Malpura | 3 261 | 75,530 | 7 | 78,798 | 26,360 | 12,925 | 39,285 | 1,18,083 | |
| Toda Raisingh | 399 | 30,828 | | 31 227 | 47,898 | 15,2[illegible]2 | 62,600 | 93,827 | |
| Niwai | 244 | 34 216 | | 34 460 | 6,748 | 6,907 | 13,695 | 48,155 | |
| Shekhawati | . | | | | 221 | 23 | 244 | 244 | |
| Dausa | 61 | 165 | | 226 | 14,578 | 3,951 | 18,529 | 18,755 | |
| Lalsot | 179 | 129 | 10 | 318 | 4,286 | 4,486 | 8,772 | 9,000 | |
| Baswa | 21 | 701 | 3 | 7 5 | 18,155 | 4,611 | 17,766 | 18,491 | |
| Sikarai | 443 | 9,989 | 16 | 10,448 | 27,355 | 7,547 | 34,902 | 45,350 | |
| Sawai Madhopur | 491 | 42,600 | 36 | 43,127 | 10,831 | 19 638 | 38,169 | 81,596 | |
| Khandar | 761 | 30,671 | 12 | 33,344 | 63,794 | 20,997 | 84,791 | 1,18,135 | |
| Bonli | 1,289 | 12,692 | 64 | 1 14 045 | 36,751 | 13,561 | 50 312 | 64,157 | |

# APPENDIX E

## Scope for Development of Irrigation in Jaipur State

The existing tanks in Jaipur State have an aggregate capacity of 17,000 M Cft, and during the rainy season of 1942-43 the total storage secured was 12 000 M Cft, of which a quantity of 8 000 M Cft, was used for the irrigation of 34,000 bighas There is scope for increasing irrigation under some of the existing tanks by improving the channels and arranging for a more economical system of supplies But the main factor being the rainfall on which the tanks depend for their storage, the area of irrigation under the tanks varies with the abundance of rainfall This season, at the time of writing (early August), the tanks are not yet full in any part of the State except in the eastern margin close to the frontier Kot Bank near Mandawar close to Alwar territory is full Important tanks of the State—Torri, Moran, Ramgarh, and several others are not full, though they have received some water This shows that the larger streams and catchments close to the hills should be dealt with This year the stream issuing from the hills in Gadha Jagir between Bishan Samand and Moran has been tackled and an estimate of Rs. 1 06 lakhs has been sanctioned to bring under irrigation 2,400 bighas, and the work is in progress. Ten other smaller tank works have also been taken in hand this year

The programme for next year is as given below —

| Serial number | Name of work | Area irrigable in bighas | Probable cost of work |
|---|---|---|---|
| | | Big | Rs |
| 1 | Proposed Bund at Jaipur | 5,966 | 5,05,345 |
| 2 | Ditto do. Morel | 25,200 | 13,50,00 |
| 3 | Ditto do Jaggar | 5,000 | 6,00,000 |
| 4 | Ditto do Gokalpura | 1,000 | 62,000 |
| 5 | Ditto do Jegrampura | 1,700 | 45 000 |
| 6 | Ditto Supply for Patan Tank | 1,600 | 35 000 |
| | | 40,466 | 25 97,345 |
| 7 | Hydro-electric Scheme with a Reservoir on the Banas river | . | 1,00,00,000 |
| | Grand total ... | . | 1,25,97,345 |

# APPENDIX D

*Statement of yield and net profit from different kinds of winter crops based on experements at the Pilani Farm*

(Supplied by Captain Pande)

| Crops | Area in bighas | Actual expenses per bigha | Actual expenses total | Actual yield per bigha | Actual total yield per bigha | Actual income per bigha | Actual total income per bigha | Actual profit per bigha | Actual total profit | Rate |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Rs a p | Rs a p | Mds s ch | Mds s ch | Rs a p | Rs a p | Rs a p | Rs a p | Rs a p |
| Lucerne | 0¼ | 27 0 0 | 168 12 9 | 18 8 0 | 113 30 0 | 13 0 3 | 84 14 0 | 13 6 9 | 83 14 9 | 0 8 0 |
| Japan Rape | 1 | 9 2 9 | 9 2 9 | 39 0 0 | 39 0 0 | 10 8 0 | 10 8 0 | 10 5 3 | 10 5 3 | 0 8 0 |
| Gram | 1 | 15 3 6 | 15 3 6 | 1 20 0 G<br>4 0 0 B | 1 20 0 G<br>4 0 0 B | 23 7 3 | 23 7 3 | 8 3 9 | 8 3 9 | 4 0 0 G<br>0 12 0 B |
| Mustard | 3 | 9 1 0 | 27 3 3 | 29 20 0 G<br>0 30 0 | 118 20 0 Green<br>2 10 0 G<br>2 0 0 B | 24 12 9 | 74 6 0 | 15 11 9 | 47 2 9 | 0 8 0 Green<br>6 8 0 G |
| Saftal | ¼ | 15 8 0 | 7 12 3 | 14 20 0 | 7 10 0 | 7 4 0 | 3 10 0 | 8 4 6 | 4 2 3 | 0 12 0 |
| Senji | ½ | 13 14 0 | 6 15 0 | 12 0 0 | 6 0 0 | 3 0 0 | 1 8 0 | 10 14 0 | 5 7 0 | 0 8 0 |
| Cowpease | 1 | 8 0 0 | 8 0 0 | 44 17 8 | 44 17 8 | 22 3 6 | 22 3 6 | 14 3 6 | 14 3 6 | 0 4 0 |
| Barley for fodder | 3 | 19 5 6 | 58 0 6 | 64 16 12 | 103 10 0 | 10 5 6 | 90 10 0 | 12 13 9 | 38 0 6 | 0 8 0<br>0 8 0 |
| Carrot | 3 | 49 12 9 | 149 6 9 | 3[illegible]8 8 12 | 909 26 0 | 169 6 9 | 508 4 6 | 119 10 0 | 358 13 9 | 0 8 0 |
| White Mustard | 1 | 10 3 6 | 10 3 6 | 3 29 8 G<br>6 0 0 B | 3 29 8 G<br>6 0 0 B | 30 4 9 | 30 4 9 | 20 1 3 | 20 1 3 | 0 6 0 |
| Wheat | 3 | 28 6 3 | 85 3 0 | 6 17 4 G<br>13 26 12 B | 19 11 11 G<br>41 0 0 B | 34 5 3 | 102 15 9 | 5 15 0 | 17 12 9 | 6 8 0 G<br>0 12 0 B |
| Barley | 6 | 14 6 3 | 86 6 3 | 8 10 10 G<br>9 33 5 B | 49 20 6 G<br>59 0 0 B | 29 10 0 | 178 0 6 | 15 4 6 | 91 10 3 | 4 4 0 G<br>0 8 0 B |
| Berseem | 12½ | 53 9 9 | 670 1 0 | 200 23 0 | 2507 7 8 | 93 9 6 | 1,160 15 3 | 39 15 9 | 499 14 3 | 3 0 0 G<br>0 8 0 B<br>0 8 0 |
| Oats | 27 | 17 7 9 | 472 7 0 | 18 10 8 Green<br>0 17 12 G<br>1 10 4 B | 403 5 0<br>11 26 0<br>40 0 0 | 9 15 6 | 260 3 0 | 8 8 3 | 203 4 0 | 0 6 0<br>0 8 0 Green<br>0 0 0<br>3 4 0 G<br>0 8 0 B |

Note: G Grain<br>B Bhoosa

# APPENDIX F

Statement showing the area of different kinds of crops irrigated in the Six *Tilladaries* *Sambat* 1999.

Year 1942—43

| Serial number. | Name of crop in Hindustani | Name of crop in English. | *Tilladaries* Torri | | Mozamabad | | Jaipur | | Gangapur | | Dausa | | Rawal Madhopur | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Big | bis | Big | bis | B g | bis | Big | bis | Big | bis | B g | bis | Big | b s |
| 1 | Jau | Barley | 13 382 | 12 | 9 0 6 | 7 | 1 0 0 | 6 | 4 636 | 10 | 6 578 | 15 | 1 073 | 3 | 28 561 | 13 |
| 2 | Chana | Gram | 1 062 | 1 | 457 | 0 | [illegible]08 | 1[illegible] | 2 847 | 1 | 3 711 | 11 | 1 459 | 15 | 9 776 | 0 |
| 3 | Baljhad | Barley and Gram | 2 471 | 3 | 1 682 | 15 | 133 | 13 | [illegible] 156 | 19 | 5 3[illegible]1 | 6 | 480 | 11 | 1[illegible]46 | 7 |
| 4 | Gehun | Wheat | 3 106 | 13 | 1 387 | 17 | 577 | 15 | 7 400 | 12 | 3 0[illegible]8 | 18 | 890 | 9 | 16 482 | 4 |
| 5 | Gojara | Wheat and Barley | 1 0[illegible]2 | 7 | 1 541 | 5 | 45 | 18 | 8[illegible]8 | 5 | 1 518 | 13 | 18[illegible] | 7 | 6 739 | 16 |
| 6 | Zeera | Cuminseed | [illegible] 086 | 15 | 972 | 11 | [illegible]05 | 18 | 1 873 | 11 | 165 | 14 | [illegible]6 | 5 | 5 511 | 14 |
| 7 | Gochani | Wheat and Gram | [illegible]55 | 19 | 10 | 18 | [illegible]6 | 16 | 2 165 | 12 | 1 436 | 16 | 161 | 15 | 4 007 | 16 |
| 8 | Ban | Cotton | 1 565 | 17 | 57 | 17 | | | 5[illegible] | 17 | | | 1 | 13 | 1 678 | 4 |
| 9 | Maitha | Fenugreek | 259 | 4 | 0 | 18 | | | 6 | 11 | 1 | 15 | | | 2 8 | 6 |
| 10 | Makka | Maize | 375 | 16 | 4 | 5 | | | | | | | | | 380 | 2 |
| 11 | Bag | Gardens | | | | | [illegible]5 | 9 | 9 | 3 | | | | | 34 | 12 |
| 12 | Badi | Vegetables | 66 | 14 | 37 | 13 | 2 | 15 | [illegible]0 | 0 | 34 | 7 | 3 | 6 | 103 | 15 |
| 13 | Parat Palao | Watering | 57 | 12 | 3[illegible] | 6 | 4 | 8 | 30 | 15 | 9 | 1 | 11 | 3 | 164 | 4 |
| 14 | Gazar | Carrot | 3 | 14 | 3 | 4 | 5 | 13 | 3 | 19 | 1 | 15 | | | 18 | 4 |
| 15 | Mungphali | Groundnut | | | 0 | 2 | | | | | | | | | 0 | 2 |
| 16 | Lalmirch | Chillies | 4 | 3 | | | | | 9 | 3 | 0 | 4 | | | 13 | 10 |
| 17 | Dhania | Coriander Seed | 3 | 10 | 23 | 13 | | | | | [illegible] | 11 | 1 | 2 | 30 | 16 |
| 18 | Sarson | Rape | 3 | 9 | 4 | 8 | | | 16 | 6 | 117 | 12 | 10 | 4 | 161 | 19 |
| 19 | Alsi | Linseed Flax | 42 | – | | | | | | | | | 2 | 1 | 44 | 3 |

From the works proposed for next year 40,000 bighas irrigation can be expected.

Tackling the Banas river, the floods in which have caused such great havoc this year, is an important means of securing safety against drought in Jaipur.

G. SESHAGIRI RAO,

*Chief Engineer for Irrigation.*

# APPENDIX G

## Suggestions for the Improvement of the Livestock in the State of Jaipur as a Post-War Reconstruction Measure

BY

J D SAMPATH KUMARAN B S A , L. V P (HONS), of I A R I,

DAIRY EXPERT, BIRLA COLLEGE, PILANI, JAIPUR STATE

India is predominantly an agricultural country where the agricultural operations are carried on with the help of the cattle Apart from this aspect there is the question of the human diet in the shape of milk Though we have here in India the lowest per capita consumption of milk, still it forms an important article of diet It is therefore quite obvious that any attempt to improve and preserve the live-stock in our country will be of importance to the national economy It is needless to review the present position of the cattle wealth of our country Suffice to say that centuries of neglect, famine, pestilence, and the present war, which has also contributed by way of indiscriminate slaughter, have all lowered the general standard and usefulness of the live-stock. The examples set by the different advanced countries of the world in improving their live stock will help us to achieve success in that direction The improvement of the live stock of any place or country is not a thing which could be achieved in a few years It is more than a man s life work The highly evolved breeds of cattle of foreign countries cannot be supposed to have been suddenly produced as we see them now They are the result of centuries of selection and careful breeding The key is man s power of accumulative selection man adds them up in certain directions The constructive breeding is done by watching the records of actual performance and not by any random selection I shall now deal with broad principles which will enable us to bring about real improvement in the cattle-wealth of the State

(1) There should be an efficent Live-stock Department with an experienced live-stock expert to direct the work of cattle improvement in the State Such a department should not only organize model farms all over the State but also give all possible technical help to the villager The department should function as the intermediary for the supply of sound and pedigreed animals, which will form the foundation herd of many a farm, and should also serve as an agency to disseminate the latest knowledge on

## APPENDIX F—(*concluded*)

| Serial number | Name of crop in Hindustani | Name of crop in English | *Zilladaries* Torri | | Mozamabad | | Jaipur | | Gangapur | | Dausa | | Sawai Madhopur | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Big | bis | Big | bis | Big | bis | Big | bis | Big | bis | Big | bis | Big | bis |
| 20 | Tambaku | Tobacco | 5 | 4 | 0 | 14 | | | 1 | 14 | | | 3 | 11 | 11 | 3 |
| 21 | Shakerqandi | Sweet Potato | 0 | 4 | | | | | | | | | | | 0 | 4 |
| 22 | Kasni | Drugs Spices | 0 | 13 | 0 | 3 | | | | | | | | | 0 | 16 |
| 23 | *Jawar* | Great Millet | *28* | *2* | *38* | *9* | *0* | *10* | | | 1 | 0 | | | 68 | 1 |
| 24 | Sonf | Aniseed | 3 | 2 | 0 | 1 | | | | | | | | | 3 | 3 |
| 25 | Chawal | Rice | 2 | 11 | | | 3 | 3 | 0 | 9 | | | | | 6 | 3 |
| 26 | Alu | Potato | | | | | | | | | | | | | | |
| 27 | Ganna | Sugarcane | 32 | 19 | | | | | 26 | 7 | 17 | 1 | 0 | 13 | 77 | 0 |
| 28 | Til | Gingelly | | | | | | | | | | | | | | |
| 29 | Singhara | Waternut | | | | | | | | | | | | | | |
| 30 | Chara | Millet | | | | | | | 2 | 3 | 1 | 3 | 2 | 14 | 6 | 0 |
| 31 | Arhar | Apalso | | | | | | | 0 | 2 | | | | | 0 | 2 |
| 32 | Matar | Peas | 0 | 12 | | | | | 1 | 8 | | | | | 2 | 0 |
| 33 | Pyaz .. | Onions | | | | | | | 8 | 16 | 5 | 6 | | | 14 | 2 |
| 34 | San | *Hemp* | 4 | 16 | | | 4 | 4 | | | | | 3 | 10 | 12 | 16 |
| 35 | Ranjka | Lucerne Grass | *0* | *6* | | | | | | | | | | | 0 | 6 |
| 36 | Moria | | 1 | 5 | | | | | | | 3 | 3 | | | 4 | 8 |
| 37 | Cori .. | | 1 | 3 | | | | | | | | | | | 1 | 3 |
| 38 | Moong | | 0 | 10 | | | | | | | | | | | 0 | 10 |
| 39 | Bajra | Millet | 2 | 0 | | | | | | | | | | | 2 | 0 |
| 40 | Shalun | | 3 | 2 | 0 | 2 | | | | | | | | | 3 | 4 |
| 41 | China | | | | | | | | 148 | 16 | 3 | 8 | | | 152 | 4 |
| | | | | | | | | | | | 0 | | | | 0 | 2 |
| | | Total | 26 526 | 0 | 15 [illegible]92 | 7 | 3 165 | 0 | 22 275 | 18 | 21 061 | 1 | 4 507 | 7 | 93 727 | 13 |

G SESHAGIRI RAO

built to suit the exact requirements By converting the grass of legume into silage, we can preserve it even for a period of twenty years. Further, there is absolute safety against fire In the contemplated model farms, model silo-pits and silo towers could be built, and the process of preservation duly demonstrated to the villagers

(5) The question of live-stock feed is a problem of continuous importance since the feed selected should not only provide the desired digestible nutrients but should also be the cheapest Thus a working knowledge of the composition of feeds and their nutritive value for each class of live-stock, together with some knowledge about the movements of prices of various possible feeds, should be had A series of monthly average prices of each important feedstuff in this State should be made available Information regarding the seasonal variations of such prices and their relation to the feeding value should be at the disposal of the villager

(6) An abundant supply of water, easily obtained whenever the animal wants it is necessary to every class of animal and specially to the dairy cows About 87 per cent of milk is water, and if the cow's supply of water is limited the milk yield is proportionately reduced *It pays to* furnish pure palatable water, summer and winter, so that the cow will *drink* large quantities as within reasonable limits, an increase in water consumption brings an increase in milk yield Filthy pond water will not only taint the milk but will be a source of many a contagious disease It is therefore important that only clean water should be made available to the cattle

(7) The live-stock also require good *shelter. It need not be* an elaborate building but just answering the *needs of the* animal It should be quite airy and easy to clean, and there should be *no* chance for the dung and urine to stagnate *In these parts* the *sand floor,* though it *answers* well, has many drawbacks *Wherever possible a pucca floor should* be made It has a double *advantage, the byre can be* kept clean and every drop of the liquid manure can be *made use of if* only suitable *drains are* constructed, which ultimately *lead to a miniature sewage farm Very* conveniently perennial grasses such as Guinea and Napier could be grown in areas where this *sewage* drainage is led The liquid manure is a wealth by itself, since it *regenerates* the soil. It *may be led by turns* to different fields. The magnitude of this advantage could be seen in a big and well planned dairy farm

(8) The ravages of contagious diseases like rinderpest and anthrax should not be allowed to continue. Unless stringent measures are taken

3

cattle improvement. There are various ways of conducting it It may hold shows and fairs at important places, arrange lectures and demonstrations, and *employ* all methods which can show the villager how best he can improve his cattle-wealth

(2) In a number of places breeding bulls should be maintained The *bull is the most important animal,* since he contributes *one-half of the* inheritance of the future herd. Progress in the improvement of any herd depends to a very large extent upon the transmitting ability of the bull The worth of the bull is known by its progeny The Live-stock Department *should see that each bull has a paddock, pasture or exercise lot* adjacent to a shelter The feed supplied to a bull should be of such quality and amount as to keep him quite vigorous

(3) In the initial stages the villagers should be *encouraged to* procure good cows typical of the breed. The cows should contribute to the villager a sufficient quantity of milk and also maintain their calves healthy and strong They should obtain a part of their feed by gleaning *fields from which crops have been harvested They should be able to convert* the fodder into milk The labour used in such cases should be partly employed on other farm work. Regarding the dual purpose animals, much importance is given to the bull calves and in some instances cow *calves are utterly neglected This will not answer the question of replace-*ment of the cows When once any farm is established the question of replacement of cows must be answered by raising heifers from the same farm stock The expense of raising a female calf to a cow is not perceptible *It may amount to that of a purchased cow but is not incurred all at once* There is another aspect as well, the villager knows the performance of the mother, and from this can judge what stuff he has in the heifer Buying always entails a certain amount of uncertainty with respect to quality, stamina, etc Here again is the need to educate the villager about all *these finer details.*

(4) *Problems relative to the preservation of the fodder are of paramount importance in any live-stock improvement programme In these* parts green fodder is available only *for a couple of months* Converting this into hay brings about a great nutritive loss Experiments elsewhere show that the conversion of green fodder into silage is a very sound and profitable practice. Permanent pastures of grasses and legumes could be formed. Surplus *green grass preserved as a silage will go a long way* in keeping up the milk flow in the *hot summer period when there is an* absolute scarcity of fodder. A wide range of crops and combinations of crops could be used for making silage The silpits or towers could be

built to suit the exact requirements By converting the grass of legume into silage, we can preserve it even for a period of twenty years Further, there is absolute safety against fire In the contemplated model farms, model silo-pits and silo-towers could be built, and the process of preservation duly demonstrated to the villagers

(5) The question of live-stock feed is a problem of continuous importance since the feed selected should not only provide the desired digestible nutrients but should also be the cheapest Thus a working knowledge of the composition of feeds and their nutritive value for each class of live-stock, together with some knowledge about the movements of prices of various possible feeds, should be had A series of monthly average prices of each important feedstuff in this State should be made available Information regarding the seasonal variations of such prices and their relation to the feeding value should be at the disposal of the villager

(6) An abundant supply of water, easily obtained whenever the animal wants it is necessary to every class of animal and specially to the *dairy cows* About 87 per cent of milk is water, and if the cow's supply of water is limited the milk yield is proportionately reduced It pays to furnish pure palatable water, summer and winter, so that the cow will drink large quantities as within reasonable limits, an increase in water consumption brings an increase in milk yield Filthy pond water will not only taint the milk but will be a source of many a contagious disease It is therefore important that only clean water should be made available to the cattle

(7) The live-stock also require good shelter It need not be an elaborate building but just answering the needs of the animal It should be quite airy and easy to clean, and there should be no chance for the dung and urine to stagnate In these parts the sand floor, though it answers well, has many drawbacks Wherever possible a *pucca* floor should be made It has a double advantage the byre can be kept clean and every drop of the liquid manure can be made use of if only suitable drains are constructed, which ultimately lead to a miniature sewage farm Very conveniently perennial grasses such as Guinea and Napier could be grown in areas where this sewage drainage is led The liquid manure is a wealth by itself, since it regenerates the soil It may be led by turns to different fields. The magnitude of this advantage could be seen in a [illegible] and well planned dairy farm

(8) The ravages of contagious diseases like rinderpest and anthrax should not be allowed to continue Unless stringent measures are taken

against such outbreaks, it will be well nigh impossible to make any headway in the improvement of the live stock Systematic and periodic inoculation against such deadly diseases and the testing of animals for tuberculosis need greater emphasis Human life is closely connected *with the health of the live-stock* *It is common knowledge* that a number of animal diseases are communicable to man From milk alone such infections as Tuberculosis, Typhoid, Septic Tonsiltis, etc , are transmitted Veterinary aid to the live stock should be available

(9) The increased demand for meat during recent times has led to very indiscriminate slaughter of live-stock There should be every strict *legislation prohibiting the slaughter of all* pregnant *animals* and *animals* capable of reproduction Slaughter houses should be rigorously inspected by competent officers. Attempts should also be made to salvage the cows and other useful animals from larger cities where slaughtering goes on unabated.

(10) The Imperial Council of Agricultural Research have recently introduced a *system of registering pedigree animals* *It would be profitable* if the breeders were encouraged to breed animals according to the true type, and get them duly registered This will naturally enhance the value of their animals, and they will be materially benefited. Since there happens at present to be no particular breed in this State, it is of *the utmost importance to* have the best *breeds* and *start* a *foundation* herd If once such a thing is done the future is very hopeful.

Within the space of this brief recommendation it is not possible to go into the details of the work This can be done at a latter stage when things take definite shape

# APPENDIX H.

## Note on the Possibilities of Hydro-Electric Power Generation in Jaipur State

Jaipur State stands in need of cheap power for development of industries, large and small There is plenty of scope for such development but want of power stands in the way Wood fuel is not available in sufficient quantity to run steam plant for direct use or for generating electric power which can be transmitted to different centres Coal has to come from a long distance, and oil fuel is expensive and is not easily obtainable

Cheap electric power is what is most needed in Jaipur State The possibilities of generating hydro-electric power have been investigated and the Chambal river, which might have been thought suitable, is found to flow too low throughout its course of 44 miles on the boundary of the State, and has a fall of only 56 ft in that length Moreover, the flow of the river is meagre during the summer season, nor is there a constant heavy flow for the greater part of the year There is no scope for a reservoir on this river in the State

The Banas river is the only source which can be utilised, though with great difficulty It has its source in the Aravali Hills, and gathers water from a catchment area of 14 000 sq miles, of which 12 000 sq miles lie above the site selected for a reservoir on the river, 4 miles up-stream of the ferry crossing of the Lalsote-Sawai Madhopur Road on the river This is the only site sufficiently near to the sites where the generating stations could be constructed The Banas is a tributary of the Chambal, and a few feet down-stream of the junction the Chambal leaves the State boundary A few miles up-stream is the most suitable place for locating a generating station, because maximum power can only be generated by dropping the water from the highest elevation to the lowest available water course,

The scheme comprises the construction of a reservoir to hold up water 60 ft deep with a water spread of 35 sq miles, and the volume of storage would be 17000 M Cft The dam will be of masonry in the centre, and at the waste weir, and of earthern bund on the flanks. Water is to be taken from this reservoir by means of a channel 12 miles in length, and dropped to the river bed at Malarna, and this gives a head of about 80 feet The tail water enters the river and goes down 15 miles and is picked up at Bajoli and by means

of another channel 12 miles in length it is dropped down by 90 ft to the Chambal bed Thus a total drop of 170 ft is secured, but the arrangement necessitates two generating stations With only one station on the Chambal, the length of channel could be about 50 miles and the loss in head would be 50 ft

The total capacity of the two stations together is designed to be 11,000 Kilo Watts, and this will suffice for the first stage The cost is estimated at Rs one crore, and with a dependable 10,000 H P of power at the consumers' end, the annual revenue anticipated is 14,50,000 at Rs 145 per H P per annum Deducting Rs 6 5 lakhs for working expenses and depreciation, Rs 8 lakhs would be the net revenue, which means 8 per cent on the capital cost The details of the project are under investigation, and the cost can only be arrived at after all the items are fully estimated for Further, the present situation and the post war situation may cause a tremendous difference in the cost of machinery and electric equipment as compared with the pre war prices, and even what could be considered as probable prices as estimated now

In the second stage, a reservoir on the Banas at Bisalpur near Deoli can be constructed after reaching an agreement with Tonk State, and the power generated can be doubled i e, instead of 11,000 K W, the capacity would be 22,000 K W The capacity of this reservoir would be another 17,000 M Cft, and water can be let down in the river utilised at the two generating stations mentioned above This is all the scope for generation of hydro-electric power in the Jaipur State there is no other place

G SESHAGIRI RAO,

*Chief Engineer for Irrigation*

# APPENDIX I

### TABLE A

Comparative statement showing (i) the *total revenue* and (ii) the *receipts from taxes as percentage of total revenue* in different states

| | | Total Revenue | Land Revenue percentage of total | Customs | Excise | Income Tax |
|---|---|---|---|---|---|---|
| 1 | Hyderabad | 8,61,28,167 | 36 34 | 12 77 | 25 08 | .. |
| 2 | Mysore | 3,96,22,000 | 29 03 | | 16 66 | 7 12 |
| 3 | Travancore | 2,53,82,250 | 13 78 | 19 20 | 29 03 | 4 10 |
| 4 | Baroda | 2,25,74,400 | 36 32 | 7 31 | 16 22 | 2 75 |
| 5 | Jammu and Kashmir | 2,32,15,000 | 27 01 | 28 32 | 1 4 | 1 32 |
| 6 | Cochin | 96,62,403 | 12 38 | 26 62 | 21 67 | 8 09 |
| 7 | Indore | 1,20,00,000 | 49 31 | 21 71 | 10 58 | |
| 8 | Bikanir . | 88,03,234 | 10 03 | 19 88 | 13 78 | . |
| 9 | Jaipur | 1,55,00,000 | 32 00 | 12 90 | 4 84 | ... |

*It may be noted*—(*i*) that there is income tax in many of the progressive States

(*ii*) that considering the percentage proportions, Jaipur's *tax resources* in general and that of excise in particular seem to be less developed than in most other States.

Adapted from a table from *The Indian Journal of Economics*, April 1941, p 833

(Figures for all the States except Jaipur are for 1938-39, for Jaipur they are for 1942 )

TABLE B.

## Comparative statement showing the *total expenditure* and the *percentages under some development heads* in different states.

| | State | Total Exp | Percentage spent on Education | Medical and public health | Agriculture and Co-operation | Industries | Public works |
|---|---|---|---|---|---|---|---|
| 1. | Hyderabad ... | 9,34,43,500 | 10 60 | 3 54 | 2 19 | 0 35 | 19 00 |
| 2. | *Mysore* ... | 4,09,60,857 | 13 41 | 4 90 | 3 16 | 9·09 | 10 46 |
| 3 | Travancore . | 2,55,64,008 | 19 75 | 5 54 | 1 30 | 0 75 | 12 03 |
| 4 | Baroda | 2,29,90,000 | 17 08 | 3 74 | 3 08 | 0 71 | 14 35 |
| 5 | Jammu and Kashmir | 2,29,49,000 | 9 05 | 3 94 | 2 29 | 0 66 | 7 49 |
| 6. | Cochin .. | 95,64,890 | 19 52 | 7 65 | 5 73 | 1·63 | 13 33 |
| 7. | Indore ... | 1,19,07,200 | 8 16 | 3 08 | 1 06 | 4 30 | 11 50 |
| 8 | Bikanir . | 6,66,16,841 | 5 96 | 6 63 | 0 60 | 0 02 | 10 62 |
| 9 | Jaipur .. | 1,35,00,000 | 6 11 | 4 90 | 0 40 | 0 09 | 13 83 |

*Note*—(i) the general lowness of proportion spent under development heads in Jaipur;

(ii) the particular deficiency under the heads of Education, Agriculture and Industries

(Adapted from *The Indian Journal of Economics*, April 1941, p 829, with Jaipur figures added )

TABLE C

Comparative statement of *expenditure on development* in different states

| | State or Province | Percentage of total expenditure | Expenditure per head of population |
|---|---|---|---|
| | | | Rs a p |
| 1 | Hyderabad | 35 68 | 2 4 11 |
| 2 | Mysore | 32 64 | 2 0 1 |
| 3 | Travancore | 39 56 | 1 15 9 |
| 4 | Baroda | 38 96 | 3 9 2 |
| 5 | Jammu & Kashmir | 23 43 | 1 4 11 |
| 6 | Cochin | 47 09 | 3 11 6 |
| 7 | Indore | 28 30 | 4 14 2 |
| 8 | Jaipur | 25 33 | 1 4 8 |
| 9 | Bikanir | 23 83 | 1 10 11 |

It may be noted—(*i*) that expenditure on development *per head of* population is lowest in Jaipur,

(*ii*) that percentage spent on development is third lowest, those still lower being Bikanir and Jammu and Kashmir

(Adapted from *The Indian Journal of Economics*, April 1941, p 826, with Jaipur figures added.)

TABLE B.

Comparative statement showing the *total expenditure* and the *percentages under some development heads* in different states.

| State. | Total Exp. | Percentage spent on Education. | Medical and public health. | Agriculture and Co-operation. | Industries. | Public works. |
|---|---|---|---|---|---|---|
| 1. Hyderabad ... | 9,84,48,500 | 10 60 | 3 54 | 2·19 | 0 35 | 19 00 |
| 2. Mysore ... | 4,03,60,857 | 13 41 | 4·90 | 3·16 | 9·09 | 10 48 |
| 3. Travancore ... | 2,55,64,008 | 19 75 | 5 54 | 1 30 | 0·75 | 1[illegible] |
| 4. Baroda ... | 2,29,90,000 | 17 08 | 3 74 | 3 08 | 0·71 | 14 |
| 5 Jammu and Kashmir. | 2,29,49,000 | 9 05 | 3 94 | 2 29 | 0·66 | 7 4 |
| 6. Cochin ... | 95,64,890 | 19 52 | 7 65 | 5 73 | 1·63 | 13 33 |
| 7. Indore ... | 1,19,07,200 | 8 16 | 3 08 | 1 06 | 4 30 | 11 50 |
| 8. Bikanir ... | 6,66,16,841 | 5 96 | 6 63 | 0 60 | 0 02 | 10 62 |
| 9 Jaipur ... | 1,55,00,000 | 6 11 | 4 90 | 0 40 | 0 09 | 13 83 |

*Note*—(i) the general lowness of proportion spent under development heads in Jaipur;

(ii) the particular deficiency under the heads of Education, Agriculture and Industries

(Adapted from *The Indian Journal of Economics*, April 1941, p 829, with Jaipur figures added )

# APPENDIX J

## List of Proposed Schools, Jaipur State.

AUGUST, 1942

(Suplied by Captain Pande, Principal, Birla College, Pilani)

A Shekhawati

1 Likhwa
2 Aminpur-Gadholi.
3 Baghina
4 Jini
5 Duwa
6 Kajra.
7 Kuloth Bari
8 Bhudanpura
9 Jaitpur
10 Kakoda
11 Churari
12 Barbar
13 Bandroli.
14 Gaonakhurda
15 Shahpur
16 Jakhod
17 Kasni
18 Gadama.
19 Kumsar
20 Solana
21 Sheonathpura.
22 Dhanu.
23 Khanpur
24 Muradpur
25 Jorawarpur
26 Ma [illegible]ata.
27 Deorar
28 Dha[illegible]har
29 Bala[illegible]garh.

30 Jakhora
31 Ghumansar
32 Kasimpura
33 Lalpur
34 Bajalo
35 Desusar
36 Lunu
37 Hassasar
38 Shekhsar
39 Hetamsar
40 Udawas
41 Ajari.
42 Badalwas
43 Mithwas
44 Sedinsar
45 Tadsar
46 Thodi
47 Laonda
48 Garinda.
49 Nathasar
50 Pathusar
51 Badhet
52 Jahasar
53 Ranasar
54 Kalothra
55 Mamlas
56 Paosana
57 Jaitpura
58 Munwar
59 Bas
60 Badwasi

TABLE D

Comparative statement showing *expenditure on education* in different states

| | | Percentage of total expenditure | Per Head of population |
|---|---|---|---|
| | | | Rs a |
| 1 | Hyderabad | 10 6 | 0 10 1 |
| 2 | Mysore | 18 41 | 0 13 |
| 3 | Travancore | 19 75 | 0 15 1 |
| 4 | Baroda | 17 08 | 1 9 |
| 5 | Cochin | 19 52 | 1 8 1 |
| 6 | Indore | 8 16 | 0 11 1 |
| 7. | Jammu and Kashmir | 9 05 | 0 9 |
| 8 | Bikanir | 5 96 | 0 6 |
| 9. | Ja pur | ( 11 | 0 4 1 |

It may be noted that *per capita* expenditure on Education is lowest in Jaipur

(*Adapted from The Ind an Journal of Fconon ics April 1941, p 825 with figures for Jaipur added*)

139 Haupura.
140 Ramsinghpura.
141 Bhadarpura.
142 Khatwar
143 Rasolpura
144 Dhundola.
145 Bijapur
146 Chandwas
147 Baradpura
148 Jaroota.
149 Momana.
150 Gopalpura
151 Kharsina.
152 Maroda.
153 Lodra.
154 Parasali,
155 Kathnaria.
156 Mungera
157 Godha
158 Gangati
159 Jaisingh Pura
160 Bhojpuria
161 Ladana
162 Amarpura

D Amber Nizamat

163 Kariri.
164 Korampur
165 Bishangarh
166 Ghas pura
167 Majpura
168 Nangal
169 Godha.
170 Nangal
171 Dadar
172 Sita Rampura
173 Lamia
174 Baloota
175 Charanwas
176 Daulatpura
177 Dungri.
178 Gopalpura
179 Kalyanpura
180 Udaipur
181 Amarpura
182 Rowari.
183 Chak
184 Sangla
185 Ganoola
186 Kankral
187 Kharas
188 Kamas
189 Kan pura
190 Bhogila.
191 Chinota
192 Bhojpura
193 Sundarpura
194 Ghatwari
195 Todaladi
196 Laripura.
197 Balod
198 Kuda
199 Pogeta
200 Kalipuri
201 Dugrawata
202 Binasna.
203 Bashni
204 Bamanwati
205 Nimi
206 Mollah
207 Nagriawas

E Jaipur Nizamat

208 Naila
209 Balupura
210 Palri
211 Sadal
212 Khanra
213 Katwar
214 Mahwara
215 Fatehpur
216 Sangaria

61. Shyampura.
62. Kanwarpura.
63. Jagatpura.
64. Padoli.
65. Rasidpur.
66. Jhingar.
67. Amirpura.
68. Punlao.
69. Khemwasar.
70. Bidasar.
71. Alchpura.
72. Garinda.
73. Antroli.
74. Anokhu.
75. Fatehpura.
76. Sihot.
77. Sewadchhoto.
78. Sewad Bari.
79. Rulana Mali.
80. Dhani Charan.
81. Kachwa.
82. Tunwa.
83. Jhajar.
84. Kirroli Bari.
85. Cutoth.
86. Tirlokinath.
87. Garoda.
88. Jeoli.
89. Ghirra Bari.
90. Ghana.
91. Jalu.
92. Bathoth.
93. Patenda.
94. Shola.
95. Juliasar.
96. Dhandhu.
97. Narsas.
98. Bhama Bara.
99. Kantiwa.
100. Dagran.
101. Shekhabas
102. Jhachiwad Bari.
103. Marratu Chhota.
104. Karange Bara.
105. Mandela Bara.
106. Balania.
107. Thithawata.
108. Thethalia.
109. Nari.
110. Shekhisar.
111. Sahahsar.
112. Jaleo.
113. Palas.

### B. Torawati.

114. Jhalra.
115. Kho.
116. Dhani.
117. Salaidipura.
118. Paniaras.
119. Khandela.
120. Bamera.
121. Bhamanwas.
122. Rajpura.
123. Sangara.
124. Kali Khera.
125. Nifar.
126. Lohorwas.
127. Ahirwala.
128. Rampura.
129. Chitrapur.
130. Pandu.
131. Amlota.

### C. Sambhar.

132. Masud Pura.
133. Raghunath Pura.
134. Manpura.
135. Pupgarh.
136. Mandias.
137. Chandanpura.
138. Akhipura.

297 Abbaipura
298 Bidakha.
299 Dungarpura.
300 Karomar
301 Gol
302 Ishawa
303 Bhaironwas
304 Mahwa
305 Balona
306 Khatwa.
307 Mirzapura
308 Lakhanpur
309 Ramalpura

G Hindaun Nizamat

310 Bhuda
311 Nangal
312 Kot
313 Garh
314 Pakhar
315 Parla
316 Sondoki
317 Samleti
318 Palanhera
319 Kanchpura.
320 Disala
321 Karanpur
322 Larla
323 Jon
324 Kheri
325 Bond
326 Tigria
327 Jhalar
328 Dhandhaipur
329 Khera
330 Naurangabad
331 Bhopar
332 Urdain
333 Morra.

H Gangapur Nizamat

334. Dhanta
335 Rajpur
336 Pal
337. Cheranda
338 Khera
339 Aluda
340
341 Mohanpur
342 Raroata
343 Khandip
344 Kosawa
345 Baroda
346 Toksi
347 Baglai
348 Sap
349 Sahar
350 Bardala
351 Bamori
352 Sarai
353 Aliganj
354 Ghuli
355 Kunkala
356 Amargarh
357 Surgarh
358 Sitor
359 Dhosi
360 Bhitali
361 Ghara
362 Amarwas

I. Sawai Madhopur Nizama

363 Ghanroli
364 Bachhoch
365 Naroli
366 Phulwara
367 Tarrara
368 Narayanpur
369 Batoda
370 Morpa
371 Ghahwapura.
372 Phalsoota

217 Khrgaro
218 Jirola
219 Satakhpura
220 Bilwar
221 Mandralo
222 Kishorpura
223 Deosinghpura
224 Jigsana
225 Sagadpura
226 Masto
227 Brampura
228 Nandpura
229. Hatheli
230 Surtipura
231 Tamaria
232 Lowara
233 Jaisinghpura
234 Khalpura
235. Sandara
236. Patan
237. Madhogarh
238 Maharajpura
239 Katepura
*240 Dhanoo*
241 Rupbari
242 Khera
243 Dhola
244 Basra
245 Tikaria Minka
246 Jagsira
247 Malpura
248 Darazpura
249 Karcha
250 Gararwansi
251 Radoli
252. Kashipura

## F Dausa Nizamat

253 Rampura
254 Udhaili
255 Tilarwara.
256 Chandaura
257 Renaya
258 Dalawarpur
259 Kanor
260 Panditpura
261 Baual
262 Lilodh
263 Khera
264 Hangola
265 Balara
266 Bajuwara.
267 Latwara
268 Rup Bas
269 Alineri
270 Pachhopara
271 Chandora
272 Baragoon
273 Basra
274 Pichupara Kalan
275 Delari
276 Kalwa.
277 Mahasra
278 Rora
279 Malarna
280 Dagoria
281 Banyana
282 Ganglawas
283 Deori
284 Rajhas
285 Chhokrawara
286 Achhalpura
287 Gandras
288 Pancholi
289 Kala Khoh
290 Bairanda
291 Khawli
292 Salawas
293 Aluda
294 Lasilawas
295 Marawas
296 Rajwas

451 Khajuria
452 Nimere
453 Mor
454 Sali
455 Jhalai
456 Kantoli
457 Borara

K. Kot Kasim Nizamat

458 Lalpur
459 Bawal
460 Bhonker
461 Outabpur
462 Balaheri
463 Baghna
464 Gikaka.

Printed by Krishna Ram Mehta, at the Leader Press, Allahabad

373 Nimod
374 Pipalda
375 Ghata
376 Mittarpura
377 Bojara
378 Srirampura
379 Baragoon
380 Sirohi
381 Khirni
382 Bapi
383 Baur Khera
384 Kodha
385 Mamroli
386 Baragood
387 Pipalwara
388 Basi
389 Siwarah
390 Jhonpura.
391 Bighina
392 Saroli
393 Ruppura
394 Kunder
395 Bh dola.
396 Kawai
397 Dehkwa
398 Man
399 Dubi
400 Khat.
401 Bhodoti
402 Chandholi
403 Badolas
404 Ulwahra
405 Biloi
406 Basu
407 Dangra
408 Kaseri.
409 Baghora
410 Birpur
411 Karoli
412 Taloora.
413 Ranthambhor
414 Kandhera

J Malpura Nizamat

415 Laiwarbi
416 Siras
417 Mundia
418 Chanepura
419 Bonegir
420 Baipura
421 Dangarthal
422 Barthali
423 Sonara
424 Jodhpur
425 Akoria
426 Bisaeo
427 Chandwa
428 Mohanpura
429 Ratanpura.
430 Sirsa
431 Mandoora
432 Sitapura
433 Shea
434 Antoli
435 Baul
436 Pipalia
437 *Gajero*
438 Pratappura
439 Gopalpura
440 Desmu
441 Kacholia
442 Kunara
443 Rajpura
444 Doli
445 Kaula
446 Jahangirpura
447 Hamirpur
448 Lamba
449 Basera
450 Pathraj